



# DINNEFORD'S

## PURE FLUID

# MAGNESIA

BRITISH MANUFACTURE

## A Century's Success!

For over a hundred years Dinneford's Magnesia has been successfully used in cases of Gout, Gravel, Acidity of the Stomach, Heartburn, Indigestion, Flatulence, Bilious Affections, &c. Doctors recommend Dinneford's Magnesia as a safe and effective laxative for regular use. Solid or powdered magnesia has been proved by eminent Chemists to cause trouble by forming hard, insoluble lumps in the bowels.

FOR FULL INSTRUCTIONS READ PAMPHLET ENCLOSED WITH EACH BOTTLE.

**AVOID IMITATIONS.**

Look for the name "DINNEFORD'S" on every bottle and label.

Manufactured in London for the past 100 years.  
Price 1/3 and 2/6 per bottle.

## AUSTRALIA

### BY THE ORIENT LINE

Under contract to carry His Majesty's Mails  
Through Tickets to NEW ZEALAND and TASMANIA.

SPECIAL ROUND VOYAGE TICKET TO AUSTRALIA. FIRST CLASS, £150.

	Tons.	London.	Toulon.	Naples.		Tons.	London.	Toulon.	Naples.
ORMONDE*	15,000	Dec. 10	Dec. 16	Dec. 18	ORSOVA*	12,000	Feb. 4	Feb. 10	Feb. 12
OTRANTO	20,000	Jan. 7	Jan. 13	Jan. 15	ORAMA	20,000	Feb. 18	Feb. 24	Feb. 26
ORONTES	20,000	Jan. 21	Jan. 27	Jan. 29	ORONSAY	20,000	Mar. 4	Mar. 10	Mar. 12

\*Tourist, one class only. Fare from £39 to £100 London to Sydney.

Tickets are interchangeable with P. & O. and other Lines.

Managers—ANDERSON GREEN & CO., LTD., Head Office: 5, Fenchurch Avenue, E.C. 3.  
Branch Offices: 14, Cockspur Street, S.W. 1; No. 1, Australia House, Strand.



# I... WANT... CADBURY'S

SEE THE NAME 'CADBURY' ON EVERY PIECE OF CHOCOLATE.

# SEAGER'S GIN

Distinctive in Character—Delicate in Flavour  
Delicious for Cocktails

EVEN DYSPEPTICS CAN SAFELY ENJOY

## THE DOCTOR'S CHINA TEA

Free from all excess tannin. The Doctor's China Tea is harmless to delicate digestions.

Harden Bros. & Lindsay, Ltd.  
Dept. 30, 30/34, Mincing Lane,  
London, E.C. 3.

1 lb. FREE

Send 6d. in stamps to cover postage and packing for a 2-oz. packet of each of the 3/2 and 3/10 blends (1 lb. in all) FREE. A 2-oz. packet of the super 4/4 blend also sent on receipt of additional 6d.

AS GOOD AS WHISKY CAN BE!

# m'callum's

## PERFECTION SCOT'S WHISKY.

# ST. MORITZ

THE ORIGINAL HOME OF WINTER SPORTS

ENGADINE  
Switzerland  
(6,000 ft. alt.)

Leading Hotels with own Private Ice Rinks.

The Big Five  
THE GRAND HOTEL  
THE KULM HOTELS  
THE SUVRETTA  
THE PALACE  
THE CARLTON

# MOTOR-UNION INSURANCE CO. LTD.

10, ST. JAMES'S STREET, LONDON, S.W. 1.





# Charming Fur-Trimmed COATS

from  
**Swan & Edgar's**  
famous

**6½ Gn.**

**Range.**

Coats:  
Second Floor.



M.C. 9

M.C.9. Elegance is the keynote of this coat fashioned for smart wear. It is made in a fancy basket weave and mounted with a large red fox collar. Three sizes. Black, navy or brown.

**6½ gns**



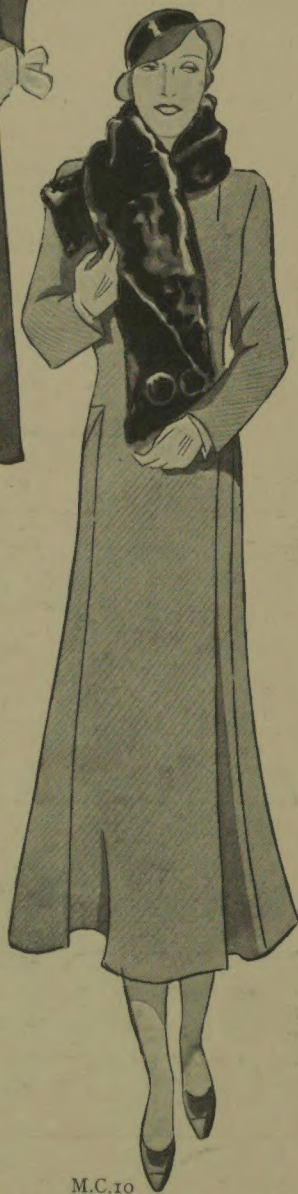
M.C. 7

M.C.7. This coat features graceful lines for all figures. With a smartly mounted roll collar of moleskin. In plain diagonal cloth. In black, navy, brown, or burgundy. Moleskin dyed brown for brown coats. In four sizes.

**6½ gns.**

M.C.10. A new note of this model is the smart wrap-over collar in rich seal coney, fastened at waist with two buttons. There is a large selection of new shades. In frieze cloth. In black, lido or raspberry. Other shades made to order in four days. Sizes S.W. and W.

**6½ gns.**



M.C.10

# SWAN & EDGAR

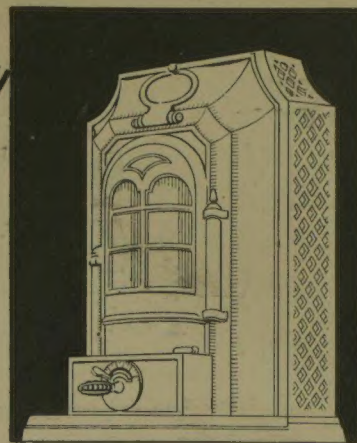
Piccadilly Circus - The hub of the World

SWAN & EDGAR LTD., LONDON, W.1.

'Phone: Regent 1616

## Comfort and Economy the "ESSE"

ONLY a minute or two for refuelling and removal of a little ash once a day—no smoke, soot or dust—but pure, ventilated, healthy warmth. The steady regulated warmth from an "ESSE" Stove (burning anthracite or other smokeless fuel) can be obtained throughout the 24 hours at an average cost of one farthing per hour. Can you afford *not* to have an "ESSE" in living room, hall, bedroom or office?



In various designs  
from £2 - 15 - 0  
upwards.

Ask for "ESSE"  
Book and name of  
nearest Stove dealer.



# ESSE STOVES

SMITH & WELLSTOOD, Ltd., BONNYBRIDGE, SCOTLAND. Estd. 1854  
Showrooms—11 Ludgate Circus, London, E.C.; and at Liverpool, Edinburgh & Glasgow

# West Indies

six weeks  
cruise  
**JAN. 24**  
BY S.S. ORFORD 20,000 TONS  
FARES FROM 86 GUINEAS

A FIRST CLASS SHIP. A  
FIRST CLASS CRUISE FOR  
FIRST CLASS PASSENGERS  
STRAIGHT FOR THE SUN  
TO BRITISH WEST INDIES  
PANAMA CANAL & SOUTH  
AMERICAN MAINLAND

An airy ship for a sunny voyage—  
porthole to every cabin—many  
single berth cabins—state-rooms  
with private bathrooms—open-  
air swimming bath.

# Orient Line Cruises

Managers: Anderson, Green & Co., Ltd., 5 Fenchurch Avenue, London, E.C.3  
West End Offices: 14 Cockspur St., S.W.1 & No. 1 Australia House, Strand, W.C.2



# THE ILLUSTRATED LONDON NEWS

The Copyright of all the Editorial Matter, both Engravings and Letterpress, is Strictly Reserved in Great Britain, the Colonies, Europe, and the United States of America.

SATURDAY, NOVEMBER 19, 1932.



**"LONDON TO-DAY IS ABSOLUTELY DEFENCELESS": NEITHER MEN, WOMEN, NOR CHILDREN SPARED BY GAS-BOMBS—  
A PICTORIAL PROPHECY OF THE AERIAL WARFARE MR. BALDWIN FORESEES.**

In the remarkable speech given almost *in extenso* on the following page, Mr. Baldwin declared his belief that, unless conditions changed, any war of the future would see the civilian, his wife, and his children in "the front line," helpless victims of aerial attack by gas-bombs and explosive bombs.

Later, Lord Halsbury added: "London to-day is absolutely defenceless: so is Brussels, and so is Berlin, and so is every big industrial town." To emphasise the point, we reprint this pictorial prophecy, which we reproduced a while ago from the "Berliner Illustrirte Zeitung."—[FROM THE DRAWING BY THEO MATEJKO.]



## MR. BALDWIN ON AERIAL WARFARE.

*Speaking in the House of Commons on November 10, the eve of Armistice Day, Mr. Stanley Baldwin made a speech on aerial warfare which has attracted the attention of the world. So arresting, so pregnant, were his words that we feel impelled to reprint them here; for none should fail to read and ponder them. Our slightly condensed version is from the "Times," by courtesy of the Editor of that paper.*



MILAN "DESTROYED" BY AERIAL BOMBERS: THE CATHEDRAL UNDER A RAIN OF DUMMY BOMBS DURING A MIMIC NIGHT ATTACK ON THE CITY.

In August of last year, the Italian air manoeuvres culminated in a great raid on Milan. Some four hundred machines were engaged, and, theoretically, the city was destroyed. As we noted when we printed this photograph at the time, it was calculated that 50 tons of high explosive bombs (represented by dummies) were dropped on the city by 80 night bombers, and a further 80 tons at dawn by day bombers.

**DISARMAMENT**, in my view, will not stop war; it is a matter of the will to peace. It is often said that two natural instincts make for the preservation of the race—reproduction of the species and the preservation of the species by fighting for safety. . . . That fighting instinct . . . is the oldest we have in our nature; and that is what we are up against. I agree that the highest duty of statesmanship is to work to remove the causes of war. That is the difficult and the constant duty of statesmen, and that is where true statesmanship is shown.

But what you can do by disarmament, and what we all hope to do, is to make war more difficult. It is to make it more difficult to start; it is to make it pay less to continue; and to that I think we ought to direct our minds. I have studied these matters myself for many years. My duty has made me Chairman for five years of the Committee of Imperial Defence. I have sat continuously for ten years on that Committee, except during the period when the present Opposition were in power, and there is no subject that interests me more deeply nor which is more fraught with the ultimate well or ill being of the human race.

What the world suffers from is a sense of fear, a want of confidence; and it is a fear held instinctively and without knowledge very often. But my own view—and I have slowly and deliberately come to this conclusion—is that there is no one thing that is more responsible for that fear . . . than the fear of the air. Up to the time of the last war civilians were exempt from the worst perils of war. They suffered sometimes from hunger, sometimes from the loss of sons and relatives serving in the Army. But now, in addition to this, they suffered from the constant fear not only of being killed themselves, but, what is perhaps worse for a man, of seeing his wife and children killed from the air. These feelings exist among the ordinary people throughout the whole of the civilised world, but I doubt if many of those who have that fear realise one or two things with reference to the cause of that fear.

That is the appalling speed which the air has brought into modern warfare; the speed of the attack. The speed of the attack, compared with the attack of an army, is as the speed of a motor-car to that of a four-in-hand. In the next war you will find that any town within reach of an aerodrome can be bombed within the first five minutes of war to an extent inconceivable in the last war, and the question is: Whose moral will be shattered quickest by that preliminary bombing?

I think it is well also for the man in the street to realise that there is no power on earth that can protect him from being bombed, whatever people may tell him. The bomber will always get through, and it is very easy to understand that if you realise the area of space. Take any large town you like in this island or on the Continent within reach of an aerodrome. For the defence of that town and its suburbs you have to split up the air into sectors for defence. Calculate that the bombing aeroplanes will be at least 20,000 ft. high in the air, and perhaps higher, and it is a matter of mathematical calculation that you will have sectors of from ten to hundreds of cubic miles.

Imagine 100 cubic miles covered with cloud and fog, and you can calculate how many aeroplanes you would have to throw into that to have much chance of catching odd aeroplanes as they fly through it. It cannot be done, and there is no expert in Europe who will say that it can. The only defence is in offence, which means that you have got to kill more women and children more quickly than the enemy if you want to save yourselves. I mention that so that people may realise what is waiting for them when the next war comes.

The knowledge of this is probably more widespread on the Continent than in these islands. I am told that in many parts of the Continent open preparations are being made to educate the population how best to seek protection. They are being told by lectures; they have considered, I

understand, the evacuation of whole populated areas which may find themselves in the zone of fire; and I think I remember to have seen in some of our English illustrated papers\* pictures of various experiments in protection that are being made on the Continent. There is one very interesting feature of that. There was the Geneva Gas Protocol, signed by twenty-eight countries in June, 1925, and yet I find that in these experiments on the Continent people are being taught the necessary precautions to take against the use of gas dropped from the air.

I will not pretend that we are not taking our precautions in this country. We have done it. We have made our investigations much more quietly, and hitherto without any publicity; but considering the years that are required to make preparations any Government of this country in the present circumstances of the world would have been guilty of criminal negligence had they neglected to make their preparations. The same is true of other nations. What more potent cause of fear can there be than this kind of thing that is going on on the Continent? And fear is a very dangerous thing. It is quite true that it may act as a deterrent in people's minds against war, but it is much more likely to make them want to increase armaments to protect them against the terrors that they know may be launched against them.

We have to remember that aerial warfare is still in its infancy, and its potentialities are incalculable and inconceivable. How have the nations tried to deal with this terror of the air? I confess that the more I have studied this question the more depressed I have been at the perfectly futile attempts that have been made to deal with this problem. The amount of time that has been wasted at Geneva in discussing questions such as the reduction of the size of aeroplanes, the prohibition of bombardment of the civil population, the prohibition of bombing, has really reduced me to despair. What would be the only object of reducing the size of aeroplanes? So long as we are working at this form of warfare every scientific man in the country will immediately turn to making a high-explosive bomb about the size of a walnut and as powerful as a bomb of big dimensions, and our last fate may be just as bad as the first.

The prohibition of the bombardment of the civil population, the next thing talked about, is impracticable so long as any bombing exists at all. In the last war, there were areas where munitions were made. They now play a part in war that they never played in previous wars, and it is essential to an enemy to knock those areas out, and so long as they can be knocked out by bombing and no other way you will never in the practice of war stop that form of bombing. The prohibition of bombing aeroplanes or of bombing leads you to two very obvious considerations when you have examined the question. The first difficulty



A WEAPON WHICH THE WORLD POWERS MIGHT WELL ABOLISH—ESPECIALLY IN THE INTEREST OF CIVILIANS: BOMBS FOR DROPPING FROM AEROPLANES.—THE BIGGEST WEIGHING 520 LB.

This photograph, taken a while ago during Air Exercises over London, gives an idea of the size of the bombs carried by the bombing aircraft of the Powers. In his speech, Mr. Baldwin pointed out that there is no power on earth that can protect the civilian from being bombed. In connection with this, a pertinent question was asked in a recent "Times" leader. "It seems possible that too much attention has been paid at Geneva to contriving restrictions for the aeroplane, and too little attention concentrated upon the real evil, which is the bomb. Why should not the bomb, for a start, be renounced solemnly and absolutely by every State in the world, and its manufacture or use be regarded as an international crime?"

about that is this—will any form of prohibition, whether by convention, treaty, agreement, or anything you like, not to bomb be effective in war? Quite frankly, I doubt it, and, in doubting it, I make no reflection on the good faith of either ourselves or any other country. If a man has a potential weapon and has his back to the wall and is going to be killed, he will use that weapon whatever it is and whatever undertaking he has given about it. The

\* Illustrated London News, Aug. 18, 1928; Feb. 1, 1930; March 7, Sept. 12, and Nov. 7, 1931; Feb. 20, May 7, July 9, and Oct. 8, 1932.

experience has shown us that the stern test of war will break down all conventions.

. . . We all remember the cry that was raised when gas was first used, and it was not long before we used it. We remember also the cry that was raised when civilian towns were first bombed. It was not long before we replied, and quite naturally. No one regretted seeing it done more than I did. It was an extraordinary instance of the psychological change that comes over all of us in times of war. So I rule out any prospect of relief from these horrors by any agreement of what I may call local restraint of that kind.

As far as the air is concerned there is, as has been most truly said, no way of complete disarmament except the abolition of flying. Now that, again, is impossible. We have never known mankind to go back on a new invention. It might be a good thing for this world, as I heard some of the most distinguished men in the air service say, if men had never learned to fly. There is no more important question before every man, woman, and child in Europe than what we are going to do with this power now that we have got it. . . . On the solution of this question not only hangs our civilisation, but, before that terrible day comes, there hangs a lesser question but a difficult one, and that is the possible rearmament of Germany with an air force.

There have been some paragraphs in the Press which looked as though they were half inspired, by which I mean they look as though somebody had been talking about something he had no right to, to someone who did not quite comprehend it. There have been paragraphs on this subject in which the suggestion was put forward for the abolition of the air forces of the world and the international control of civil aviation. Let me put that in a slightly different way. I am firmly convinced, and have been for some time, that if it is possible the air forces of the world ought to be abolished, but if they are you have got civil aviation, and in civil aviation you have your potential bombers. It is all very well using the phrase "international control," but nobody knows quite what it means, and the subject has never been investigated. . . .

In my view, it is necessary for the nations of the world concerned to devote the whole of their mind to this question of civil aviation, to see if it is possible so to control civil aviation that such disarmament would be feasible. . . . It has never really been much discussed or thought out, and yet to my mind it is far the most important of all the questions of disarmament, for all disarmament hangs on the air, and as long as the air exists you cannot get rid of that fear . . . which I believe to be the parent of many troubles.

One cannot help reflecting that during the tens or hundreds of millions of years in which the human race has been on this earth, it is only within our generation that we have secured the mastery of the air, and I do not know

how the youth of the world may feel, but it is no cheerful thought to the older men that having got that mastery of the air we are going to defile the earth from the air as we have defiled the soil for nearly all the years that mankind has been on it.

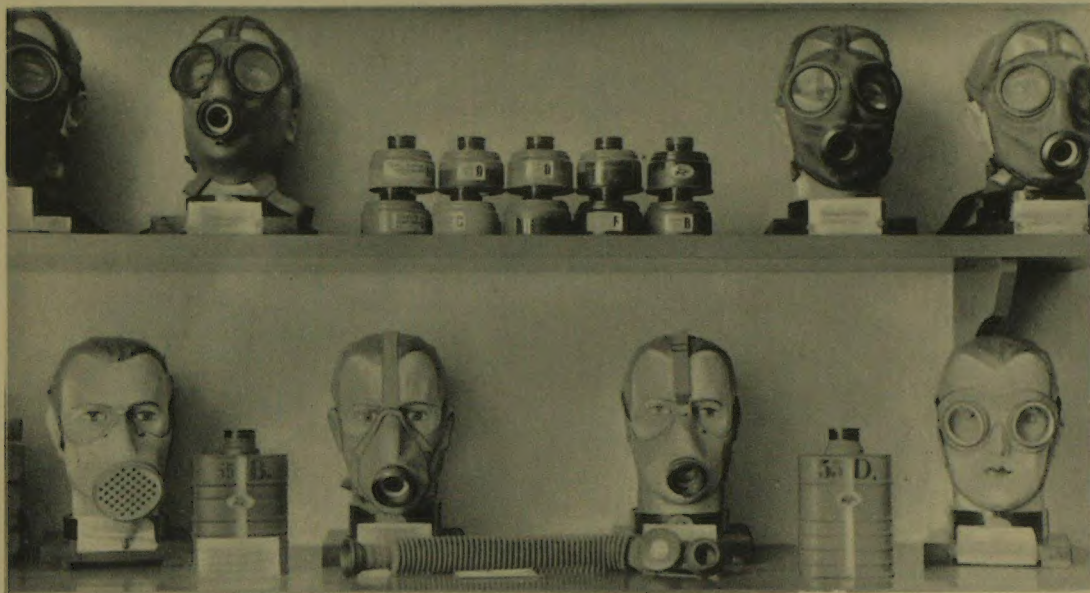
This is a question for young men far more than it is for us. They are the men who fly in the air, and future generations will fly in the air more and more. Few of my colleagues around me here will see another great war. I do not think that we have seen the last great war, but I do not think that there will be one just yet. At any rate, if it does come, we shall be too old to be of any use to anyone. But what about the younger men?—because it is they who will have to investigate this matter, they who will have to fight out this bloody issue of warfare; it is really for them to decide. They are the majority on the earth. It touches them far more closely. The instrument is in their hands.

There are some instruments so terrible that mankind has resolved not to use them. I happen to know myself of at least three inventions deliberately proposed

for use in the last war and which were never used—potent to a degree and, indeed, I wondered at the conscience of the world. If the conscience of the young men will ever come to feel that in regard to this one instrument, the thing will be done. But if they do not feel like that. . . . As I say, the future is in their hands, but when the next war comes and European civilisation is wiped out, as it will be and by no force more than by that force, then do not let them lay the blame on the old men, but let them remember that they principally and they alone are responsible for the terrors that have fallen on the earth.



**"ON THE CONTINENT PEOPLE ARE BEING TAUGHT":  
ANTI-GAS PRECAUTIONS IT WERE CRIMINAL TO NEGLECT.**



A SUBJECT OF UNIVERSAL CONCERN—AS WAS POINTED OUT BY MR. BALDWIN IN HIS ARRESTING SPEECH ON AERIAL WARFARE: GAS-MASKS MANUFACTURED FOR THE USE OF CIVILIANS—IN THIS CASE, GERMAN.



THE QUESTION OF THE CIVIL POPULATION'S LIABILITY TO GAS-ATTACK IN A FUTURE WAR: PRACTISING LIFE-SAVING FROM GAS IN A GERMAN ANTI-GAS SCHOOL.



PUPILS IN A GERMAN ANTI-GAS SCHOOL READY TO BEGIN PRACTICAL WORK: RECEIVING FINAL INSTRUCTIONS AS TO BEHAVIOUR WHEN WORKING IN GAS-MASKS.

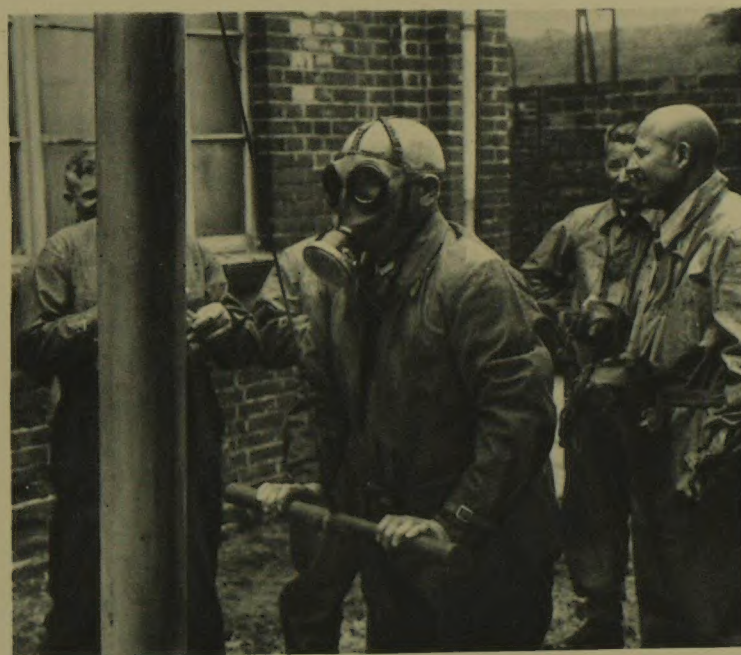
During the recent debate on Disarmament, Mr. Baldwin brought aerial warfare to the fore. "I think," he said (in the speech given elsewhere in this issue), "it is well for the man in the street to realize that there is no power on earth that can protect him from being bombed, whatever people may tell him. The bomber will always get through. . . . I am told that in many parts of the Continent open preparations are being made to educate the population how best to seek protection. . . . There is one very interesting feature of that. There was the Geneva Gas Protocol signed by twenty-eight countries in June 1925, yet I find that in these experiments on the Continent people are being taught the necessary precautions to take against the use of gas being dropped from the air. I will not pretend that we are not taking our precautions in this country. We have done



THE PHOTOGRAPHER GAS-MASKED PERFORMS IN ORDER TO USE HIS CAMERA IN GAS-FILLED ROOMS IN A GERMAN ANTI-GAS SCHOOL.



DOCTORS IN GAS-MASKS PRACTISING FIRST AID FOR Gassed PERSONS ON A LEATHER DUMMY: A FEATURE OF THE GERMAN ANTI-GAS SCHOOLS.



A PUPIL TESTING THE STRENGTH OF HIS BREATHING AND THE AIR-CONTENT OF HIS LUNGS, BEFORE PUTTING ON A GAS-MASK FOR THE FIRST TIME. it — made our investigations—much more quietly, and hitherto without any publicity. But seeing the years that are required for making preparations, any Government of this country in the present circumstances of the world would be guilty of criminal negligence in neglecting to make preparations." Some months ago we had cause to ask the question: "What is Britain doing towards preparing defence against future air-raids and gas-bombs?"—We then published a number of photographs of the manufacture of gas-masks in Germany and gas-mask drill there. In East Prussia the operations included smoke-screens for towns, bridges, and other possible objectives of bombing attacks. An air-raid demonstration was also recently given at Charlottenburg, Berlin. The exercises, which were held in the grounds of the Technical High School, were staged with impressive realism. Police, firemen, and reserves took part in the operations, all wearing gas-masks, and were seen engaged in the rescue of persons apparently overcome by poisonous fumes; while the Red Cross and ambulance services administered first-aid. Similar demonstrations at Bremen were illustrated in our issue of November 7, 1931; while photographs in that of February 20 last showed how Russian workers are trained to wear gas-masks. Germany, however, since she has no military aeroplanes or anti-aircraft artillery, is particularly vulnerable in this respect.



## ARE THERE SUCH THINGS AS WARRIOR PEOPLES IN EUROPE?

By **SIGNOR GUGLIELMO FERRERO**,

*The distinguished Italian Philosophical Historian; Author of "The Greatness and Decline of Rome," "Ruins of the Ancient Civilisations," etc.*

*We continue here our series of occasional articles by Signor Ferrero, dealing with world politics as that famous modern historian sees them and interprets them. The views set forth in the series are personal and not necessarily editorial.*

"The Germans, who are a warrior people, loving war for its own sake. . . ."

THAT sentence was uttered a few months ago, at Geneva, in a small circle of people of the highest culture, several of them holders of important political positions. At first, it called forth no comment. But the moment came when someone asked what was the German people had made for the sake of making war, in the seventeenth century. Frederick II., was the immediate reply. But on several sides the objection was raised that the population of Prussia in the seventeenth century was still in Slav majority; and that, German or Slav, it had not had much to do with the wars of its restless sovereign. The wars of Frederick II. were political, fought by professional armies composed partly of foreigners. The people were merely spectators, when they did not happen to be victims. We were agreed readily that the wars made before the Revolution by that other great Germanic power, Austria, belonged to the same family; and that the German people only became a warrior nation after the French Revolution, at the beginning of the nineteenth century.

That point settled, we easily came to the conclusion that the same might be applied in the case not only of Italy and England, but of Russia. Before the Revolution, the Russian army was recruited by requisitioning the serfs, much as we should requisition horses. Every landowner was obliged to furnish the army with a certain number of soldiers, whom he drew from among his serfs, who were compelled to serve for twenty years. They were forced into being professional fighters, whereas the masses—peasants and monks—were under no military obligation whatsoever. In Russia, too, it was the nineteenth century that imposed war on the masses as a civic duty.

At that juncture I called their attention to the fact that, before the Revolution, everywhere, even in France, war was the profession of a small number of specialists, and no concern of the people's. I was brought up on the idea that the French were the warrior people by definition; we were even taught so at school. From the time of Brennus and his Gauls, those ancestors of the French who went as far as Rome to pull the beard of the venerable Senator Papirius on the Capitol, France has never ceased disturbing the peace of the world in order to gratify her own warlike disposition and ambition. However, it did not take me a very profound study of the history of France to enable me to discover that the masses of the French were only embroiled in the wars of their country from the Revolution onwards. During the seventeenth and eighteenth centuries, the wars of France, like the wars of Prussia and the Empire, were all either of a political character or wars of balance and expansion, waged by the monarchy with professional armies composed, in considerable part, of foreigners—Swiss or Germans. The peasants and workmen knew war only by pictures, hearsay, or invasion. Their resistance to conscription, especially the conscription of the Empire, shows that this warrior nation was not over-anxious for the privilege of shedding its blood in the four corners of Europe for the glory of the Emperor.

On the whole, in all Europe, until the Revolution, the people were passive spectators, not actors, in the great drama of war. It was so in Germany, as in France, Italy, England, and Russia. Before the Revolution, the Swedes alone, perhaps, at a certain period, deserved the appellation of warrior people. Everywhere else the States fought amongst themselves, while the people continued to go about their business. With the advent of the Revolution the people at last began to use arms, fight, and become warriors willy-nilly, not to satisfy their own bellicose humour, but because they were compelled to do so by circumstances

stronger than their desire to stay quietly at home. The warrior peoples belong to the vanished ages of history. A few remnants of that dim past are still to be found, perhaps, in the mountains of Afghanistan or the high plains of Ethiopia. In Europe there have been no warrior peoples for many a long day. There are nothing but armies recruited by general conscription, and political situations pregnant with war, as the cloud that carries lightning.

The illusion that there are still warrior peoples in Europe at the present time, the illusion that caused that definition to be applied to France in the past, to Germany

to-day, is born of a kind of misunderstanding. In Prussia, Austria, and France, countries that waged many wars both before and after the Revolution, there are still to be found groups of families, both noble and bourgeois, which for two centuries have produced officers as a matter of tradition. Each generation of them has paid its tribute to war. This kind of warrior nobility is not to be found in countries that have made few wars in the course of the last two centuries; Italy, for instance, with the exception of Piedmont. These families, which have always looked upon arms as their foremost duty, are a hotbed of officers, centres of the warlike spirit, and a valuable resource in great armed conflicts for the countries that own them. But it is the existence of these families that has given rise to the illusion that certain peoples possess a particular aptitude and passion for war.

These historical considerations are of practical import nowadays. They can be of use to us when judging the situation of Europe and trying to discover the true dangers that threaten it. After 1914, it was rather too much taken for granted that Germany was a kind of unique monster, in no way resembling any of the other European Powers. Europeans like all the rest, the Germans more or less share the faults and virtues of our ancient continent. By temperament, they are neither more nor less warlike than the English or the French. If the danger of war depended on the bellicosity of individual peoples, Europe could sleep in peace. But the danger of war depends on political situations; and these are subject to continual change. Is there any means of estimating whether the trend of the political situation in Germany is now in the direction of peace or the contrary? That is the question that is engrossing the world.

There is some means—in my opinion. The more the German Government assumes a dictatorial character, the more the peace will be endangered. The supreme danger would be a "totalist" Government, as we say in Italy; that is to say, a Government that completely does away with any opposing party and the right of opposition. That would certainly be the case if the Hitlerites came into power. It is easy to foresee what would happen then: the experiment has already been made in other countries. At first the National-Socialists would try to govern with an opposition: but they would not be proof against the test for very long. To govern with an opposition, it is necessary to possess a certain capacity and reliability. The Hitlerite movement, like all other similar movements set in motion since 1914, is founded on incapacity inflated by boasting. A National-Socialist Government, in a régime of liberty, could not withstand adverse criticism for six months. And it would be the final proof that parliamentary government is the most perfect form of government yet created by man.

But it is also the reason why, being unable to stand out against opposition, a National-Socialist Government would be driven inevitably to take advantage of its power to suppress it. That also has been seen elsewhere. The attempt might fail, or, on the other hand, it might succeed. In the first case, it would mean civil war. In the second, all the political forces that wish for peace—and they are still many in Germany—would be rendered powerless. I do not know whether, in future years, Germany will once more be in a position to undertake another great war, or, if not, when she would be likely to become so. But it is certain that, if a dictatorship seized the power, peace would only be guaranteed by Germany's real or imaginary, and in any case temporary, lack of means to break it. Into what anguish and upheavals Europe would then be thrown it is easy to imagine.

What, then, are we to think of the policy pursued for the past several months under the direct inspiration of the Marshal-President? The idea that lies behind it is clear: to reconstruct Bismarck's régime in Germany, in place of the vulgar caricature of Bismarckism offered by National-Socialism. Bismarck never once considered doing away with the opposition; but he wished to

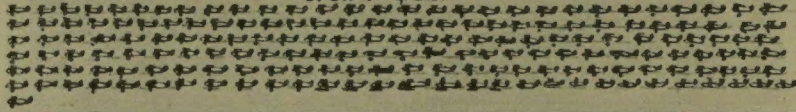
[Continued on page 824.]

EACH AEROPLANE ILLUSTRATED REPRESENTS TEN ACTUAL AIRCRAFT.

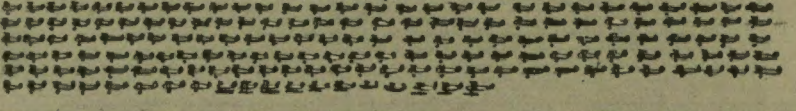
FRANCE = 2,097.



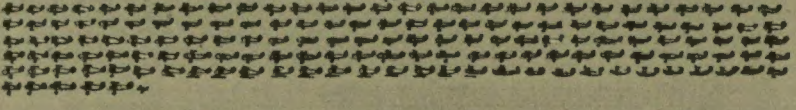
U. S. A. = 1,752.



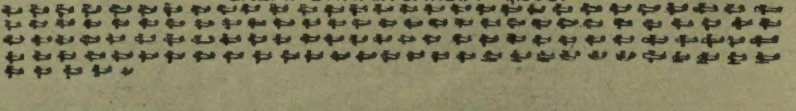
JAPAN = 1,639.



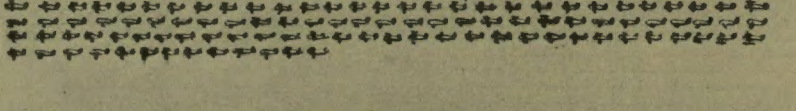
ITALY = 1,507.



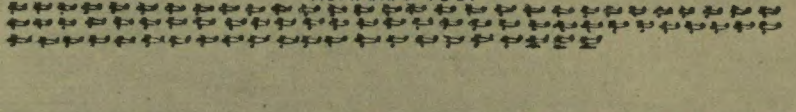
GREAT BRITAIN & INDIA = 1,208.



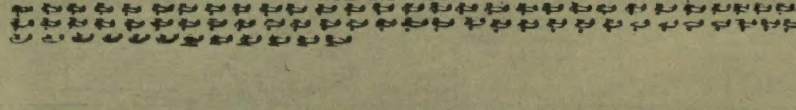
SOVIET RUSSIA = 1,000.



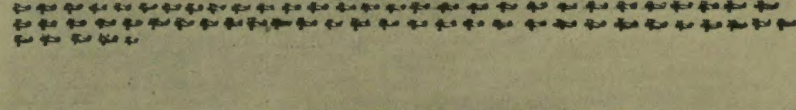
RUMANIA = 799.



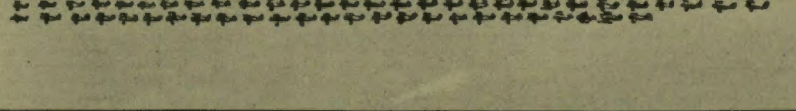
POLAND = 700.



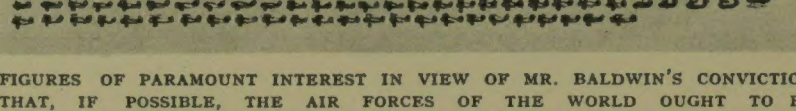
YUGOSLAVIA = 627.



CZECHOSLOVAKIA = 546.



SPAIN = 533.



FIGURES OF PARAMOUNT INTEREST IN VIEW OF MR. BALDWIN'S CONVICTION THAT, IF POSSIBLE, THE AIR FORCES OF THE WORLD OUGHT TO BE ABOLISHED: THE STRENGTH OF AIR FIGHTING FORCES OF THE POWERS.

Speaking in the House last week, Mr. Baldwin said: "Disarmament, in my view, will not stop war; it is a matter of the will to peace." Later, he added: "As far as the air is concerned, there is, as has been most truly said, no way of complete disarmament except the abolition of flying. Now that, again, is impossible. We have never known mankind to go back on a new invention. . . . I am firmly convinced, and have been for some time, that if it is possible the air forces of the world ought to be abolished, but if they are you have got civil aviation, and in civil aviation you have your potential bombers." In view of this pronouncement, we reprint this diagram from one of our issues early this year; and, in connection with it, we must quote the following from the note we gave at the time: "All the great nations of the League have supplied figures of their air strength. Apparently, however, the League did not draw up a uniform set of questions for all, but left the Air Departments of the various Powers to make a return in any manner they thought fit. The result is comparative chaos, as one Power includes training aircraft, another sends only first-line aircraft, a third includes machines on order (and not even commenced), and another includes every machine it possesses."



## TRAGEDY IN A LANCASHIRE COAL-MINE: THE EDGE GREEN PIT DISASTER.



A LABOUR MEMBER WHO DESCENDED THE PIT AND FOUND AMONG THE DEAD SOME OF HIS OLD SCHOOLFELLOWS AND MATES: MR. GORDON MACDONALD, M.P., WITH MR. J. ALLEN PARKINSON, M.P.



AFTER THE EXPLOSION WHICH KILLED 25 MEN AND BOYS IN A COAL-MINE AT ASHTON-IN-MAKERFIELD: A RESCUE PARTY BRINGING OUT A BODY.



A RUSH TO THE RESCUE DIRECTLY AFTER NEWS OF THE DISASTER REACHED THE PIT-HEAD: MEN WITH SAFETY-LAMPS RUNNING UP STEPS TO GO DOWN THE SHAFT.



THE SCENE AT THE PIT-HEAD AFTER THE EXPLOSION IN THE MINE BELOW: GROUPS OF ANXIOUS WATCHERS AND ENQUIRERS, WITH AMBULANCE-VANS IN READINESS.



THE TRAGEDY OF THE BEREAVED WOMEN: A PATHETIC GROUP OF STRICKEN RELATIVES RETURNING FROM THE PIT MORTUARY.



A MINER'S HOME DEPRIVED OF FATHER AND BREADWINNER: ONE OF THE BEREAVED FAMILIES—A WIDOW WITH SEVEN YOUNG CHILDREN TO BE PROVIDED FOR.

The tragedy and heroism latent in the work of coal-mining were once more called forth by a disaster which occurred in the early hours of November 12, in the Edge Green Pit (No. 9) of the Garswood Hall Colliery Co., Ltd., at Ashton-in-Makerfield, South Lancashire. Between 2 and 3 a.m. an explosion caused the deaths of 25 men and boys. Rescue work was at once organised. By noon next day fifteen bodies had been brought up, and another was recovered some hours later. The fate of the rest was uncertain until, as darkness fell, all hope was extinguished by the news that a fall of roof had blocked the path of the rescuers. Great bravery was shown by men at work elsewhere in the pit, who

rushed towards the scene of the explosion. One (John Fernley) was believed to have perished, but was eventually found and revived by oxygen. Among those who descended the pit was Mr. Gordon Macdonald, M.P. for the Ince Division, who was distressed to find the bodies of men who had been his schoolfellows and, later, his mates in the mine. The disaster left about 20 widows and 40 or 50 children without a breadwinner, and the relief fund, promptly opened, must provide for some hundred dependents of the victims. Lord Derby, who had received a message of sympathy from the King and Queen, visited the colliery, as did Lord Colwyn and Sir Henry Walker, Chief Inspector of Mines.





By G. K. CHESTERTON.

IT may reveal an incurable and indecent levity or frivolity in my character, but most information about Bolsheviks, and especially by Bolsheviks, makes me laugh. I know that some newspaper proprietors and such national leaders think that it should only make us shudder, and issue periodical summonses to the public, telling us to keep on shuddering. But I do not believe very much in shuddering as a way of fighting; I have never heard of any stupidity that was extinguished by shuddering; and I have heard of several that were extinguished by laughing. Certainly there are aspects of the case that are no laughing matter, as stated by some really responsible writers in their formulation of the case against the Bolsheviks. But at least there is nothing but pure, hilarious, happy laughter for some of the Bolshevik methods of formulating the case for the Bolsheviks. Thus, for instance, when I merely hear that some of the Russian atheists have pulled down a church, I am naturally distressed. But when I hear that they have turned it into something called an Anti-God Museum, then for the moment all other moods melt into innocent and un-mixed merriment.

So far as I can make out, you fit up an Anti-God Museum by getting hold of fragments and relics of all sorts of religions, or what you guess to be religions, and put them in glass cases with little labels on them. I have heard that the embalmed body of a Saint, let us say, will be on one side, and opposite to it an Eskimo who has been kept in cold storage, for some reason known or unknown. Then there would be an ordinary Egyptian mummy and the bones of a Hindu monk, or what not; and so on. And when the brilliant, piercing, penetrating intelligence of the New Youth has once discovered that it is possible to put the relic of a Coptic hermit in the same room with a fetish from the South Sea Islands, it will instantly draw the logical deduction that the cosmos is devoid of any design. When that powerful intellect has wrestled for a few hours with the fact that the glass case containing a reliquary is very much like the other glass case containing a ju-ju, it will be fully and finally obvious that there is no God. How any human being could think any other human being could be affected, in deciding any serious question, by such a ridiculous jumble of Jarley's Waxworks I cannot imagine myself; but then I am of the old guard of the democratic idealists, and prefer to believe that all men are equal in the possession of human reason. But, in truth, there is really one sense in which such things can be taken seriously. Indeed, it has a moral against ourselves, which is sometimes more wholesome than a moral against our opponents.

The very worst part of the Bolshevik bosh is that it is by no means confined to Bolsheviks. Indeed,

all the worst parts of it the Bolsheviks have borrowed from the sort of economic and biological materialism that had already existed in Western Europe long before they turned it into a wild but belated riot in Eastern Europe. Thus, while the Communists may be called mad in many ways, what they are really mad on is machinery; which is exactly what our own grandfathers and great-grandfathers were mad on, in the time of the Manchester School. It cannot be said of us now that we are mad on it, or even wild about it. It can only be said that we are tame. But Moscow has the same stupid belief in mechanical action and dead matter supporting its extreme Communism, which our fathers had supporting their extreme Individualism. And just as their machinery is borrowed machinery, so their materialism is borrowed

earnest and cultured young Communist gravely go round my gallery, and deduce that men must be restrained from their too facile habit of carving great Greek sculpture, lest it should lead them to break out at last into making waxwork busts for shop-windows? Would that thoughtful young man infer that there was a serious danger of somebody beginning with something quite small and simple, like Michelangelo's sculpture, and be thus encouraged to make formless little fetishes for cannibals? Or dare we hope that there would dawn on him the somewhat evident and elementary thought that most things have a better form and a worse; that you cannot abolish a whole branch of human culture by showing that cultured people sometimes do it better than uncultured people; and that even when the two

men are really aiming at the same thing (which is by no means always the case), you cannot prove from the unworthy example that the worthy example is worthless? Yet I am bound to say, as I have already said, that this obvious fallacy was not invented by the poor Bolshies; they only picked it up from the nineteenth-century materialists, along with a lot of other second-hand goods and third-rate theories.

To this we must add a thousand other things, which the antiquated atheist has probably never heard of at all. There are endless complications of real and recent research, which have cut across the old simple lines of the rationalist theory of religious origins. There is the accumulating evidence of savages themselves, that they are not quite so savage as they were painted; the evidence about the deliberate simplification and voluntary convention in their religious art. There is what many old-fashioned people



ARMISTICE DAY IN LONDON: THEIR MAJESTIES THE KING AND QUEEN AND MEMBERS OF THE ROYAL FAMILY LEAVING AFTER THE SOLEMN CEREMONY AT THE CENOTAPH.

Walking beside the King is the Home Secretary, Sir John Gilmour. With the Queen are the Duchess of York and Prince George. In the next row (from right to left) are the Duke of Gloucester, the Duke of York, and Prince Arthur of Connaught. The Prince of Wales was in Edinburgh, where he attended the observance at the Stone of Remembrance as representative of the King and Queen, and visited the National War Memorial and the Field of Remembrance.

materialism. It is the old nineteenth-century materialism of the stalest and stuffiest kind; the kind that nearly all scientific men in the West have now abandoned, because it is stale and stuffy. The stuffiness is apparent in all that stupid old notion of discrediting the high religions by comparing them with the low religions. The staleness simply stinks from the open doors of the Anti-God Museum.

Supposing I were to set out to abolish the art of Painting, and thought I could do it by opening a gallery in which good pictures were hung on one side and bad pictures on the other. Suppose I were a Moslem and an Iconoclast, fanatically desirous of destroying all statues and statuary. And suppose I did it by opening a museum in which I stuck up the Venus of Milo opposite a wax lady out of a low-class hairdresser's shop. Suppose I put the Madonna of Michelangelo side by side with a South Sea Island idol, little more than a lump of stone. Would it prove anything against Sculpture? And why should it prove anything against Religion? Would the

would call the increasing similarity between the highest modern art and the South Sea Island fetish. Then there is the whole department of demon-worship; and the cases in which idols were not beautiful because they were not meant to be beautiful, but deliberately meant to be ugly. There is the increasing comprehension of harshness and severity in certain schools of sculpture. Above all, there is the increasing interest in the higher religions, considered in an intrinsic and intellectual fashion, and not as they were considered by the superficial generation that mistook them for superstitions. All this is the result of real research as recorded in real museums, with real classification and real and responsible labels. And against all this the belated sect would set up what the Americans would call a Dime Museum, about as authoritative as a penny peep-show. I do not wonder that they have preserved the institution of a Censorship, lest the poor rustics, who look into the peep-show to see that there is no God inside, should be allowed to look outside and see what is going on in the world.



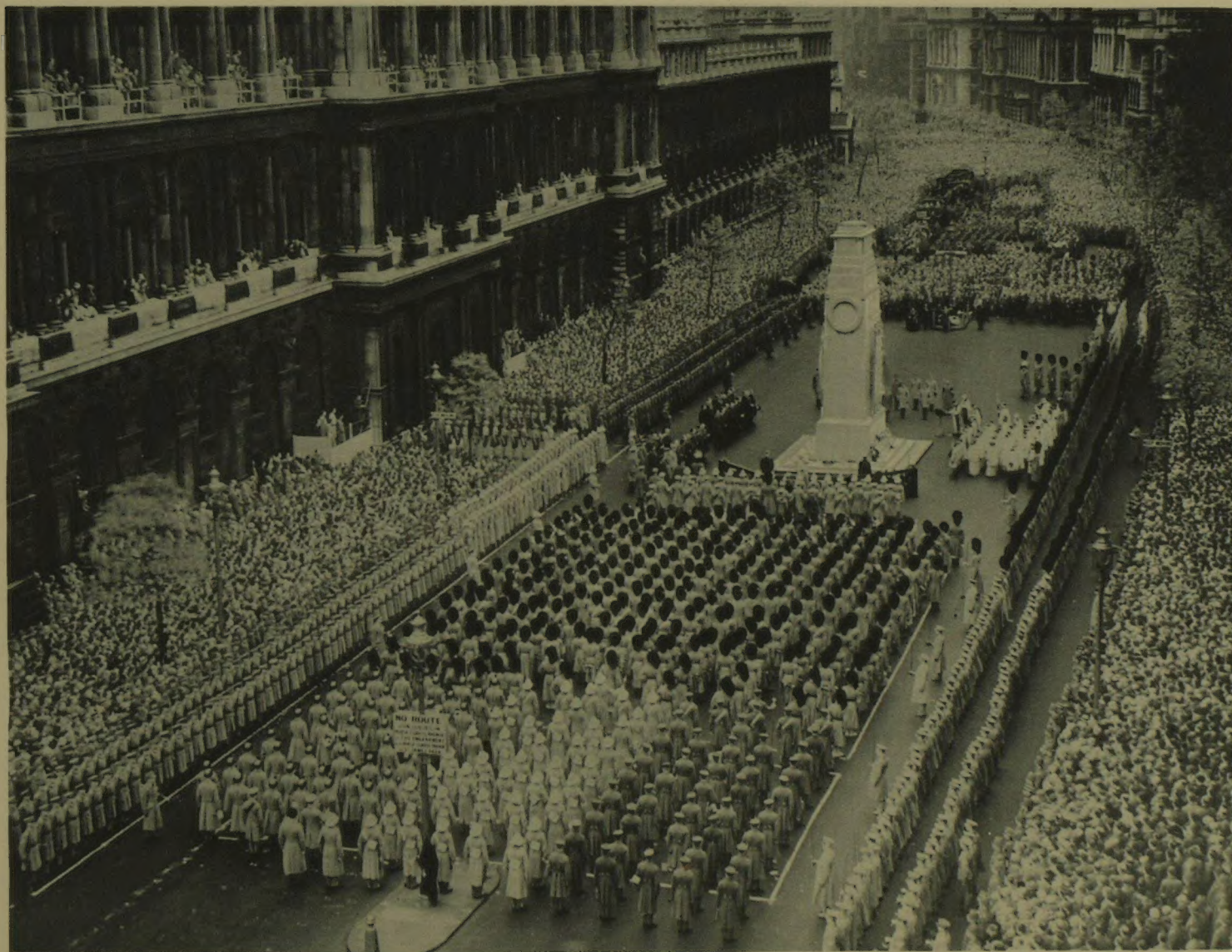
## ARMISTICE DAY IN LONDON—BY INFRA-RED AND BY NORMAL PHOTOGRAPHY.



BY ORDINARY PHOTOGRAPHY: THE TWO MINUTES' SILENCE AT THE CENOTAPH ON NOVEMBER 11.

ON a number of occasions we have reproduced photographs of landscapes taken by infra-red photography; that is to say, by means of an infra-red plate and filter associated with a long-focus lens. Here we give a photograph of an event taken under the usual conditions and, for comparison, a photograph of the same scene taken by means of an infra-red plate and filter associated with an ordinary lens. It is of particular interest to see how differently colour is recorded in the two photographs, especially in the cases of the uniforms. In the ordinary photograph, for example, the group in the centre foreground presents the troops as a dark mass relieved by the white helmets of the marines; whereas in

[Continued above.



BY INFRA-RED PHOTOGRAPHY: THE TWO MINUTES' SILENCE AT THE CENOTAPH ON NOVEMBER 11.

*Continued.]* the infra-red photograph the black bearskin caps of the Guards stand out from the uniforms, which are shown in unnaturally light tones. This lightening of tones, it will be noted, is in evidence in nearly every part of the infra-red photograph. In this connection, it must be remarked that the infra-red filter attached to the camera lens obstructs the reflection of ordinary light, and admits only the reflection of the infra-red rays to which the special infra-red plate is sensitive. An advantage of the infra-red method for subjects such as the one here dealt with is shown by the clarity of the more distant area seen in the infra-red picture: in the ordinary photograph the haze is very apparent.





THE PRINCE OF WALES IN EDINBURGH FOR THE ARMISTICE CELEBRATIONS: HIS ROYAL HIGHNESS PLACING A CROSS IN THE FIELD OF REMEMBRANCE.

While his Majesty was attending the ceremony at the Cenotaph in London on November 11, the Prince of Wales was present at the Remembrance Day observances in Edinburgh. His Royal Highness represented their Majesties in laying a wreath upon the Stone of Remembrance in front of the City Chambers. The wreath was of poppies and laurel in the form of a St. Andrew's Cross. After the ceremony at the Stone of Remembrance the Prince attended a service in St. Giles's Cathedral. Later in the afternoon he paid a brief visit to the Field of Remembrance in Princes Street, and placed a small cross there. In the course of his speech that evening at a British Legion meeting, his Royal Highness said: "The Earl Haig Fund, which we support when each year we buy our poppies, is doing wonderful work in mitigating the hardships of unemployed and disabled ex-Service men."

## ARMISTICE DAY: THE PRINCE IN EDINBURGH; DUBLIN CELEBRATIONS.

AT THE STONE OF  
REMEMBRANCE:  
THE PRINCE  
OF WALES  
LAYING UPON  
IT THE WREATH  
SENT BY  
THEIR MAJESTIES  
THE KING  
AND QUEEN.



ARMISTICE CELEBRATIONS IN DUBLIN: MAJOR-GENERAL SIR WILLIAM HICKIE PLACING A WREATH AT THE FOOT OF A WOODEN CROSS NEAR THE WELLINGTON MONUMENT.



THE WOODEN CROSS ERECTED NEAR THE WELLINGTON MONUMENT IN THE PHOENIX PARK: A VIEW OF THE CROWD WHICH GATHERED TO OBSERVE THE SILENCE.



A DISORDERLY SCENE IN DUBLIN DURING THE ARMISTICE CELEBRATIONS: A GROUP OF DEMONSTRATORS IN O'CONNELL STREET BEING BROKEN UP BY THE POLICE.

Armistice Day celebrations in Dublin were carried out with due solemnity. Minor disorders occurred in the streets during the day and in the course of the night, but were kept well in hand by a strong force of police. A large crowd of people congregated in the Phoenix Park to observe the Two Minutes' Silence, and a number of ex-soldiers marched there in procession. Immediately after the Silence Major-General Sir William Hickie, who commanded the 16th (Irish)



A FLAG AFTERWARDS CONFISCATED BY THE POLICE TO AVOID FURTHER DISORDER: THE UNION JACK WHICH WAS ATTACKED DURING THE CELEBRATIONS.

Division in France, laid a wreath at the foot of the wooden cross erected near the Wellington Monument. The disorders that occurred were limited, for the most part, to the snatching of poppies from those who were wearing them, to the breaking of several windows, and to a few casual scuffles; and a group of young men attacked people bearing a Union Jack. In Belfast, also, impressive ceremonies were devoted to the memory of the fallen.



# PSYCHOLOGY AT THE WHEEL: TEMPERAMENT TESTS OF CAR-DRIVERS.

SKETCHES BY OUR SPECIAL ARTIST, BRYAN DE GRINEAU, AT THE NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY.

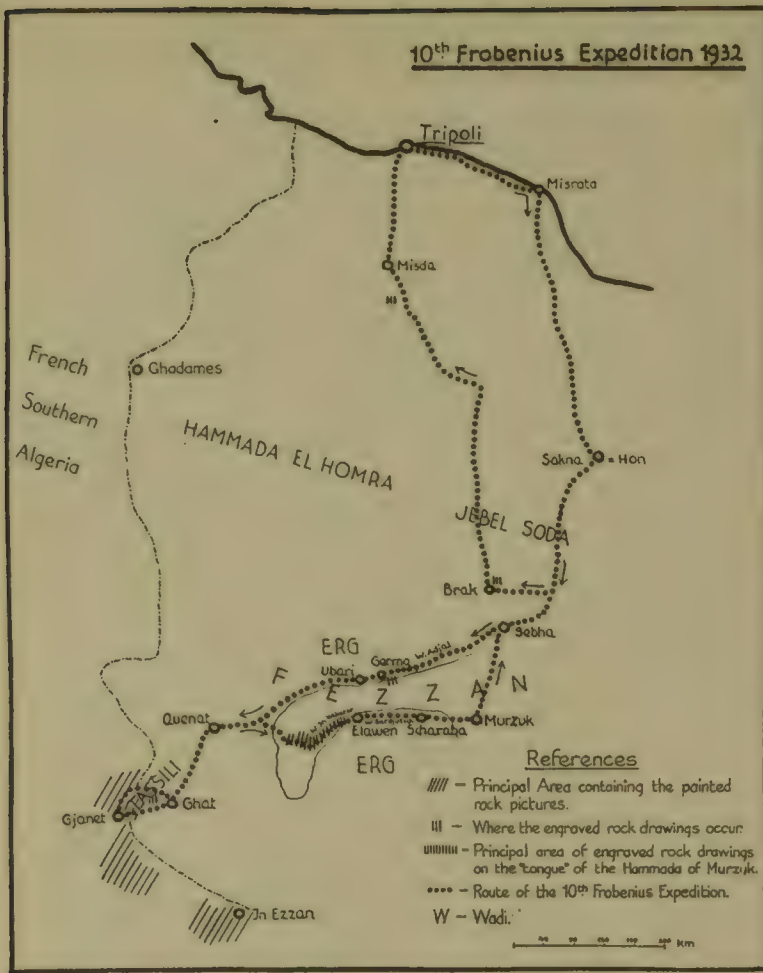


## TESTING A MOTOR-DRIVER'S EYESIGHT, JUDGMENT OF SPEED OR DISTANCE, AND NERVE REACTION TO EMERGENCIES: INTERESTING METHODS EMPLOYED BY THE NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY.

Our artist illustrates some interesting methods of testing the temperament of motor-drivers, applied by the National Institute of Industrial Psychology, during eighteen months' research, to a large number of bus and lorry drivers, whose driving records have, for the most, corroborated the results. The Director of the Institute, Dr. G. H. Miles, has stated: "The tests are providing very valuable data. In Paris, bus-drivers have been put through somewhat similar tests for seven years, and their accidents have not increased at anything like the same proportion as other street accidents. This is, of course, due to the discovery of bad drivers." The Minister of Transport, we

may add, recently expressed interest in the Institute's work. Experts think that, in view of the increase of accidents in this country, some psychological test of drivers is necessary. Ordinary practical tests do not show how a driver will act in an emergency. Referring to the test shown in the large central drawing, a representative of the "Observer," who tried it, says: "Actually it is the screen vision which moves, but you can steer all over the road and round corners; you can accelerate and put on the brakes. A graph will show how fast you took the corners and whether you kept to the left. The apparatus is unique and the mechanism something of a secret."





WHERE PROFESSOR LEO FROBENIUS MADE HIS WONDERFUL DISCOVERIES OF PREHISTORIC ROCK PICTURES: A MAP OF THE FEZZAN REGION IN THE HINTERLAND OF TRIPOLI, SHOWING THE ITINERARY OF HIS TENTH AFRICAN EXPEDITION.

IN the tenth expedition of our series of German explorations in Africa, I took as its primary basis historically recorded facts, and, secondly, clear indications of the existence of prehistoric and early historic monuments. The earliest particulars regarding the ancient history and culture of Fezzan, south of Tripoli and extending into the Sahara, emanated from Herodotus, in the fifth century B.C. In Fezzan there still lived then the Garamantes, of whom the "Father of History" writes, in the 183rd Chapter of the 4th Book (Melpomene), that they were tillers of the soil (not nomads), that they chased the cave-dwelling Ethiopians with "four-horse chariots," that their cattle were compelled to graze backwards by their horns being bent forwards. Greek mythology repeatedly concerned itself with Garamas, the progenitor of the Garamantes. When the Romans, under Cornelius Balbus, in 20 B.C., conquered the country, little more transpired concerning it than perhaps the fact (mentioned by Strabo and Pliny) that the Garamantes cultivated rice and the like. With the division of the Roman centres of culture into West and East, their land disappears from observation and record; the invading East swallowed up Fezzan, which apparently lost its original character and became a land of transit for trade connecting the Sudan with the East; then, for centuries, Fezzan was ruled from Bornu, in the interior of Africa, and through the dominance of Negro princes, and the slave trade, became a country of the blacks.

The forgotten land of Garama was recalled to European notice by the English expedition of Clapperton, Denham, and Dr. Oudney. In 1823 Dr. Oudney ascertained, by the discovery of a Roman monument, that the present-day Djerma must have been erected by Cornelius Balbus on the ruins of the old Garama, capital of the Garamantes. This fact was confirmed in 1850 by the German explorer Dr. Heinrich Barth, who had travelled in the Sudan with the English expedition. It was Dr. Barth who made and published drawings of the first prehistoric or early historic monuments in Fezzan. These were three drawings on rocks which he ascribed to the period of the "historic Garamantes." The observations of Deveyrier, de Bary, and Nachtigall proved that there were more such records awaiting discovery. What decided me were particulars given me in 1916 by a native of the Taneilkum tribe (Fezzan), who reached Germany as a coloured prisoner of war. But for his information, I should not have succeeded, in so relatively short a time, in finding this "temple of nature," with its gallery of pictures, lying so far off the ordinary caravan road.

The locality is as follows: From Murzuk a rocky plateau extends for about 240 kilometres westward towards Ghat, in the centre of the "Erg," the land of sand-dunes. Opposite the tip of the "tongue" (see map, above), bending southward, lie the marl mountains of Ghat. A wadi (dry river-bed), emerging from the foothills of the Ghat mountains, runs westward along the northern slope of the Murzuk plateau, and another along the southern slope; the Wadi Adjall in the north, the Wadi In Habeter-Berdjutsch in the south; the latter empties near Murzuk into the remnant of a former lake, called Scharaba. Rock drawings have been preserved both in the Ghat country and around the springs of the In Habeter-Berdjutsch, while in the Wadi Adjall they have been practically destroyed, if ever there were many there. The rock pictures in the Ghat territory, like those in the adjoining French Sahara, are mostly painted, although there are

only found stone implements of that period (Chellean, Acheulean) on the heights *in situ*, while on the slopes only fragments occurred, apparently washed down by rain. On the basis of these finds, often assembled in large masses, the position of the dwellings could be exactly determined, and also the fact that the population, particularly in the final Chellean epoch, was very dense. In the Mousterian epoch, the water must have subsided very greatly, because workshops and dwellings of that time have shifted low down along the slopes; the population then was still denser. Up to the end of that epoch, only stone implements have been preserved here. When we reach the neo-Palaeolithic period (in Europe the Aurignacian, Solutrean, and Magdalenian sequence, to which corresponds in Africa the transformation through phases of the Capsian culture), the aspect both of the landscape and the discoveries changes. During the pluvial epoch rivers still ran in the rocky channels; in the dry seasons, however, the "irrigation" of the mountain areas was confined to lakes. As shown by the distribution of stone tools, the settlements were always on the level shores of these lakes, while the steep side opposite was devoted to cult purposes; because these steep sides are even to-day adorned with monumental pictures or their remains. Here I desire to emphasise at once an observed fact which is very significant and of great importance for the country's economic development. Even to-day, at the foot of the decorated rock walls, we always find (even though only after digging in the sand) excellent water free from salt. Those steep rock walls, however, which would otherwise have been more suitable for receiving such pictures, but at the

## A GREAT DISCOVERY OF PREHISTORIC ART:

SOME 2500 ROCK-DRAWINGS AND PAINTINGS FOUND IN THE FEZZAN DESERT—A VAST PICTURE CHRONICLE OF PRIMITIVE MAN AND CONTEMPORARY ANIMALS.

By Geheimrat Professor LEO FROBENIUS, Leader of the German Africa Expedition, and President of the German Africa Institute in Frankfurt. (See Illustrations on pages 799, 800, and 801.)  
World Copyright, 1932, by Frobenius Expedition. (Presse-Photo, Berlin.)

still signs of drawings cut in the rock. In the In Habeter territory only some engravings are preserved, and paintings have practically disappeared. I had the western area, in the Tassili Mountains, examined and recorded by Dr. Jensen and a trained artist, Mrs. Agnes Schultz, while I myself investigated the central and eastern sections, accompanied by another artist, Miss Ruth Assisa Cuno.

By far the most important finds proved to be the monuments in the valleys containing the sources of the Wadi In Habeter. These are the Wadi Aramas, Wadi Tel Issaghen, Wadi Gamant, and (after their confluence), the Wadi In Habeter itself. In prehistoric times, when ice lay over Central Europe (the last glacial period) and torrential rains prevailed there (the last pluvial period), the "tongue" of the Murzuk Plateau was covered by humus and rich vegetation, while the surrounding heights and depressions were filled with animal life (elephant, *Bubalus antiquus*, buffalo, rhinoceros, giraffe, ostrich, antelope, and crocodile). Flowing and stagnant waters were so numerous that people lived on the heights as on islands; this is evident from the fact that we

foot of which there is no water, either on the surface or beneath, have been left bare and undecorated. This remarkable law, apparently, also applies far north, as far as Misda.

Let us turn now to the rock pictures, found, as stated, on the steep sides of former lake shores. Their distribution appears at first sight arbitrary, one here and one there and then again a collection. Closer study shows that at some points there are intentional isolations, and in others a methodical arrangement in small or large groups, and that another difference is recognisable both in style and technique. A corresponding variety is observable regarding sizes; for example, we found pictures of giraffe, rhinoceros, and crocodile up to life size. In the gallery of In Habeter III. we found remains, unfortunately fragmentary, of a picture of a giraffe nearly 6 metres (about 19 ft.) high! Other pictures of the same animal were under one metre or less. This variety goes hand in hand with unmistakable peculiarities in style and technique: the large paintings are realistic and naïve; the smaller show artistic skill. This also applies to pictures of elephants, though these are never full size; one is 1½ metres high, while another, carried out with artistic skill, is only 57 cm. Actually, however, the division is far from being so sharp as here stated. Critical examination, from an artistic standpoint, of the method of representing eyes, ears, and limbs indicates a great "curve" as between the mode of expression in eidetic actuality (realism) and the naturalism of a virtuoso (followed by degenerative decadence of form), but this curve passes through a series of episodes, each constituted by clearly defined variations. One feature, however, is of primary importance for the artistry of mankind in the monuments now discovered; that is, critical examination shows that variations of style, shown in this "curve," succeeded each other in a definitely determinable succession of forms. This new Fezzan record of art is unquestionably inferior in variety of style to that of South Africa, but, whereas in the south what is older is only very rarely detectable as such (owing to the succession of underlying and overlying paintings), so that it is difficult to obtain any perspective view of their origin, here in the north the forms are so distinct that the various works are almost immediately clear, regarding form, in their relation to what preceded and what followed them.

[Continued on page 828.]



A PRECIPITOUS "GALLERY" OF PREHISTORIC ART: ROCK-DRAWINGS IN THE WADI IN HABETER II., INCLUDING RHINOCEROS (LARGE AND SMALL), CROCODILE, AND (ON THE RIGHT) A BOWMAN; WITH A MODERN NATIVE STANDING ON A LEDGE TO INDICATE THE SIZE OF THE DRAWINGS.

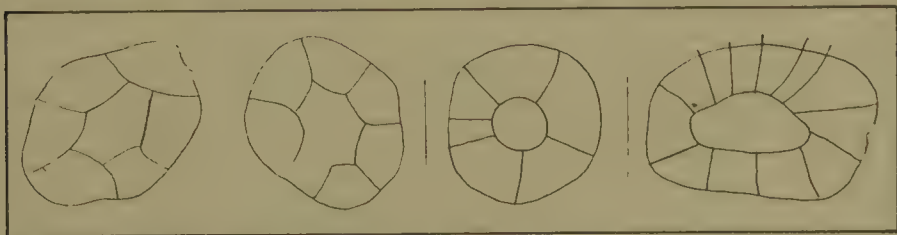


# ART AFFINITIES OF THE FEZZAN ROCK-DRAWINGS: WIDESPREAD PARALLELS.

WORLD COPYRIGHT 1932 BY FROBENIUS EXPEDITION (PRESSE-PHOTO, BERLIN). (SEE ARTICLE BY PROF. FROBENIUS ON THE OPPOSITE PAGE.)



THE STYLISTIC RELATIONSHIP OF THE NEWLY DISCOVERED ROCK-DRAWINGS OF FEZZAN (MARKED A ON THE MAP OF AFRICA) TO OTHER PREHISTORIC ROCK ART IN EUROPE AND AFRICA: TYPICAL FEZZAN EXAMPLES (ALL LETTERED A) PLACED ALONGSIDE SPECIMENS FROM ELSEWHERE, WHOSE ORIGIN IS INDICATED BY VARIOUS REFERENCE LETTERS (EXPLAINED IN THE FOOTNOTE BELOW).



FOREHEAD SYMBOLS WHICH OCCUR IN A SIMILAR FORM IN THE ROCK-DRAWINGS OF FEZZAN (LEFT), THE SAHARAN ATLAS (CENTRE), AND NUBIAN DESERT (RIGHT): EXAMPLES FOR COMPARISON.



ROCK-DRAWINGS FROM WADI HABETER III. (LEFT) AND HABETER II. (RIGHT) OF OXEN WITH THEIR HORNS CURVING FORWARD — A FORMATION DESCRIBED BY HERODOTUS AS FORCING THEM TO GRAZE BACKWARDS.

THE remarkable prehistoric rock-drawings discovered by Professor Frobenius in Fezzan, Northern Africa (as he points out, in his article opposite), are akin to all Euro-African pictorial art in prehistoric or early historical times. He goes on to say, with reference to the large illustration above: "An attempt has here been made to express this fact in diagram form by placing alongside each Fezzan example (lettered A throughout) a specimen of one of the other well-known styles. It is not possible, of course, in this sketch to offer more than a meagre selection. It will be seen, however, that the technique of the magnificent buffalo carved in relief at Tel Issaghen I (the left animal in top row) can be followed back into the clay-relief work (B) of the post-glacial Franco-Cantabrian hollow moulding art; that the figures of women at Ghat are found again in those



PALMETTOES—(LEFT) FROM TEL ISSAGHEN II, BEATEN ON STONE; (CENTRE) FROM FEZZAN, PAINTED ON STONE; (RIGHT) FROM A NEGADA VASE (4000 B.C.): A MOTIVE OF HIGH ANTIQUITY, INDICATED BY THE PARALLEL WITH PRE-DYNASTIC EGYPTIAN VASE-PAINTING.

of the East Spanish prehistoric style (C); that the Tel Issaghen I buffalo can almost be considered a copy of the famous picture from the Saharan Atlas (D); that the representation of striped and horned animals is also the same; that an ox with the symbol of the sun between its horns corresponds to the Ox-god Mnevis (E) in Egypt; that the dedicatory dances before sacred animals in Fezzan are depicted in the same way as in the art of the Nubian Desert (F), and that the double-triangle figures therein have their

parallel in the paintings of Ghat; that the squatting people with animal heads (G) and animal-headed herdsmen (G) of South Africa reappear in the art of Fezzan and Ghat."



## A "SALON" OF THE ROCKS DATING FROM 12,000 TO 3000

WORLD COPYRIGHT 1931 BY FROBENIUS EXPEDITION (FROBENIUS-PICTO).



FIG. 1. SHOWING THE PREHISTORIC ARTIST'S MASTERY OF LINE: A COPY MADE FROM THE ROCK-ENGRAVING ILLUSTRATED IN FIG. 2 ADJOINING.



FIG. 2. A CROCODILE WITH ITS YOUNG: A WONDERFUL REPRESENTATION INCISED IN THE ROCK, FOUND IN WADI HABETER III, FEZZAN, NORTH AFRICA.

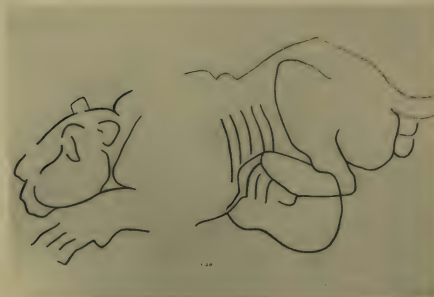


FIG. 5. BRINGING OUT THE PREHISTORIC ARTIST'S POWER OF ACHIEVING A TENSE EFFECT BY SIMPLER MEANS: A COPY OF THE LION IN FIG. 6.

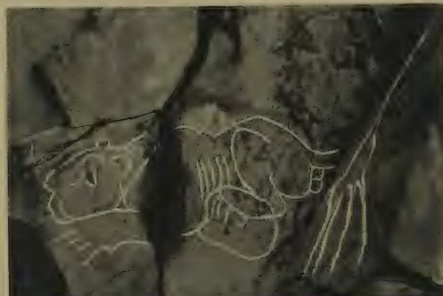


FIG. 6. A LION COUCHED TO SPRING, AND A GIRAFFE: ROCK-DRAWINGS IN WADI HABETER III, SHOWING THE VARIETY OF SCALE USED BY PREHISTORIC ARTISTS.



FIG. 9. EMPHASISING THE CURIOUS SUPERIMPOSED EFFECT OF ANIMAL FIGURES ON DIFFERENT SCALES OF SIZE: A COPY OF THE ROCK-DRAWING REPRODUCED IN FIG. 10.

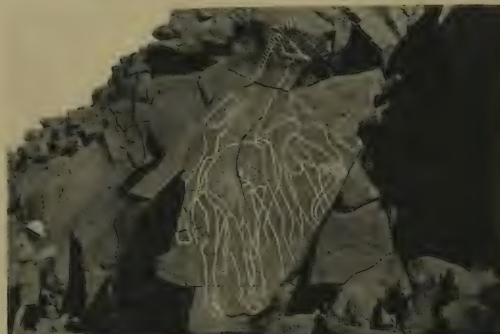


FIG. 10. AN ELABORATE COMPOSITION OF THREE ANIMALS—ONE ELEPHANT AND TWO GIRAFFES: A ROCK-DRAWING IN WADI HABETER III, WITH A WOMAN ARTIST MAKING A COPY OF IT.

Professor Leo Frobenius, the famous German archaeologist, made a great discovery of prehistoric art during his tenth expedition to Africa, this year, as described in his article on page 798 of this number. He found in Fezzan, south of Tripoli, about 2500 rock-drawings dating from the year 12,000 to 3000 B.C., forming a vast picture chronicle of prehistoric times. This black desert of Fezzan, through which so many caravans and expeditions have passed, all unconscious of the treasures hidden in its barren wastes, thanks to this wonderful find, becomes of the first importance to students of pre-history, as a land associated with the beginnings of human art, and one of the chief points of intersection of many prehistoric cultures. The above photographs illustrate some of the finest examples of the rock-drawings, which reveal especially the extraordinary skill of these primitive artists in the delineation of the great forms of animal life around them. Beside each photograph is placed a copy of the original, made on the spot by one of the women artists who accompanied the expedition. These copies are interesting because they bring out more clearly, in a modern medium, detached

## B.C.: NEWLY FOUND MASTERPIECES OF PREHISTORIC ART.

HERLIN. (SEE ARTICLE BY PROF. LEO FROBENIUS ON PAGES 798 AND 799).



FIG. 3. THE BOLD SIMPLICITY OF PREHISTORIC LINE-DRAWING: A COPY OF THE ROCK-DRAWING SHOWN IN FIG. 4.



FIG. 4. ANIMAL-HEADED MEN WITH A SLAIN RHINOCEROS: A ROCK-DRAWING IN WADI HABETER III.—A WONDERFUL EFFECT OF EXULTATION.

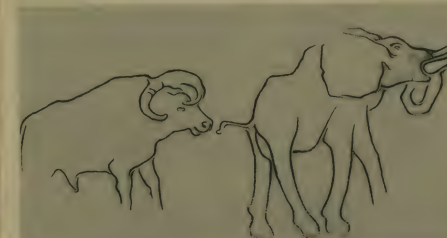


FIG. 7. COPIED FROM THE ROCK-DRAWING SHOWN IN FIG. 8, THE ADJOINING ILLUSTRATION: A STUDY OF A PREHISTORIC ARTIST'S SENSE OF FORM IN THE REPRESENTATION OF ANIMAL LIFE.



FIG. 8. AN ELEPHANT AND A RAM: A PREHISTORIC ROCK-DRAWING DISCOVERED IN WADI TEL ISSAGHEN II, SHOWING GREAT SKILL IN THE DELINEATION OF THE ELEPHANT'S HEAD.

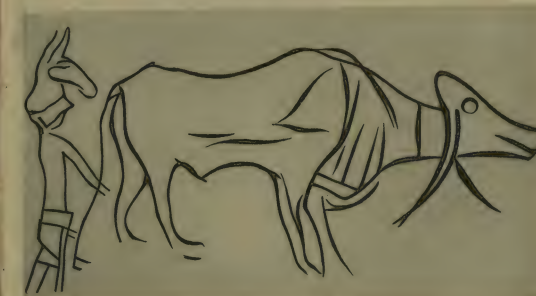


FIG. 11. REALISING IN A MODERN MEDIUM THE ESSENTIAL VIGOUR OF PREHISTORIC ART: A COPY OF THE ROCK-ENGRAVING ILLUSTRATED IN FIG. 12.

from the obscuring surface of the rock, the mastery of line and sense of form possessed by the prehistoric artist, and his power of expressing so much vigour and movement by the most economical means. On another page in this number, Professor Frobenius displays by comparison the affinities of the Fezzan prehistoric art with that found on other sites in Africa and Europe. In this connection we may recall that in our issues of August 24, 1929 and March 1, 1930 he contributed illustrated articles on the prehistoric rock-drawings of South Africa. In the first he wrote: "One of the greatest surprises which students of the history of art have experienced during the last half-century has unquestionably been the discovery that humanity of a very ancient period, the post-glacial Stone Age, created galleries full of works of art, which were of an amazing perfection. The first discoveries were made in the caves of southern France and the north of Spain, where, from the beginning of the Aurignacian epoch, the 'Franco-Cantabrian' style prevailed. The East Spanish style, completely different, has only been studied and properly appreciated quite recently. In Africa, too, examples of this prehistoric art are to be found in abundance."

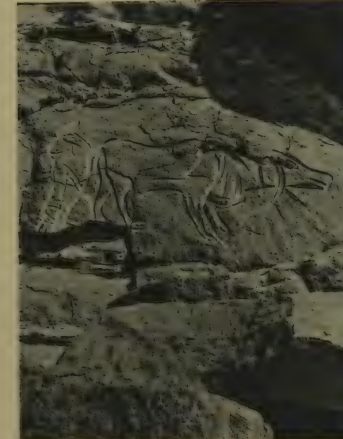


FIG. 12. A PREHISTORIC PROTOTYPE OF BOTTOM THE WEAVER AFTER HE HAD BEEN "TRANSLATED": A MAN WITH AN ANT'S HEAD, AND AN ON-A ROCK-ENGRAVING IN WADI HABETER III.



## THE ROYAL VISIT TO NORTHERN IRELAND: THE NEW PARLIAMENT HOUSE AT STORMONT.



THE NEW PARLIAMENT BUILDINGS OF NORTHERN IRELAND AT STORMONT, WHICH THE PRINCE OF WALES ARRANGED TO OPEN ON NOVEMBER 16: A VIEW FROM THE MASSEY AVENUE ENTRANCE.



AN IMPOSING FAÇADE: THE MAIN ENTRANCE TO THE NEW PARLIAMENT HOUSE, WHICH, DESIGNED BY MR. ARNOLD THORNTON, F.R.I.B.A., IS BUILT IN THE GREEK CLASSICAL STYLE AND SURMOUNTED BY A FIGURE SYMBOLISING BRITANNIA.

THE Prince of Wales arranged to open the new Parliament House of Northern Ireland at Stormont, near Belfast, on November 16, and so pay his first visit to Ulster. His Royal Highness decided to travel from Liverpool to Belfast in the motor-ship "Ulster Prince," escorted by the cruiser "Dorsetshire," and attended by Sir John Gilmour, the Home Secretary. The new buildings are worthy, both in external appearance and interior equipment, to house the Parliament which the

(Continued above.)



THE SPEAKER'S CHAIR IN THE SENATE, ADORNED WITH THE ROYAL ARMS. A PHOTOGRAPH ILLUSTRATING HOW DIGNITY AND SIMPLICITY ARE COMBINED WITH MAGNIFICENCE IN THE NEW BUILDING.

King inaugurated eleven years ago. Erected close to Stormont Castle, the official residence of the Prime Minister of Northern Ireland, they are a gift from Great Britain to Ulster, and have been completed at a cost of over £1,000,000. Work on the site began in 1924, and the ceremony of laying the foundation stone was performed in 1928 by the Governor of



THE CENTRAL HALL, TWO STOREYS HIGH, AND MEASURING ABOUT 100 BY 48 FEET: A ROOM TO WHICH THE KING HAS PRESENTED THE MAIN ELECTRIC LIGHT FITTING FROM ONE OF THE APARTMENTS AT WINDSOR CASTLE.

PHOTOGRAPHS BY STEWART



THE SPEAKER'S CHAIR IN THE COMMONS CHAMBER: A PLACE THAT WILL BE OCCUPIED, WHEN THE CHANGE-OVER IS EFFECTED, BY THE RT. HON. H. G. H. MULHOLLAND, M.P.

Northern Ireland. The complete structure is 369 feet long, 167 feet deep, and 70 feet high, rising to almost 100 feet at the centre. As our photographs show, it is built in the Greek classical style, relying on simple, well-proportioned masses, with little elaboration. It is approached by a long processional avenue, culminating in a flight of steps built in Irish granite and flanked by a balustrade

## BUILDINGS GIVEN BY GREAT BRITAIN AND CROWNED BY A FIGURE OF BRITANNIA.



THE COMMONS IN THE PARLIAMENT BUILDINGS, WHERE THE FIFTY-TWO MEMBERS WILL DELIBERATE: A MAGNIFICENT PANELLED CHAMBER, OF NOBLE PROPORTIONS, WITH A DECORATED CEILING.



THE SENATE, TO ACCOMMODATE THE TWENTY-SIX SENATORS OF ULSTER: A GENERAL VIEW FROM THE GALLERY, SHOWING THE SPEAKER'S CHAIR IN THE BACKGROUND.

of Portland stone. Empire materials have been used wherever possible in the construction: Portland stone and granite predominate, and Australian walnut wood-block flooring finishes the surface on the ground floor. That part of the ground floor which is not taken up by the central hall, together with part of the first floor, is occupied by the library, dining-rooms, conference and committee rooms, and accommodation for the Governor of Northern Ireland and Cabinet Ministers. For many of these details we are indebted to "The Northern Whig."



THE BALCONY OVER THE MAIN ENTRANCE, SHOWING FIVE OF THE SIX GREEK COLUMNS WHICH DOMINATE THE ARCHITECTURAL SCHEME: A POINT COMMANDING A VIEW OF THE OPEN COUNTRY ROUND THE NEW PARLIAMENT BUILDING.

BALE, LIVERPOOL.



## BOOKS OF THE DAY.

HITHERTO I have regarded the sporting man and the reading man as distinct types, with different tastes and habits, not often combined in one and the same individual. I am beginning to think, however, that the sportsman, in his moments of quiescence, must really be an insatiable bookworm, to judge from the prodigious fare provided for him by the publishers. We may imagine him, after a strenuous day, retiring to his den to burn the midnight electricity as he burrows among innumerable tomes, designed to improve his technique, recall past delights, or lure him into new fields of adventure through the chronicles of kindred spirits. For my part, as a townsman, debarred from the open-air life by necessity rather than choice, I find the breezy literature of sport a refreshing change after a surfeit of less lighthearted works.

At a time when our thoughts have been occupied so much with political events across the Atlantic, and we hear of a prospective "Lady of the White House" who was at school in England and loves everything English, it is pleasant to be reminded of a strong link in Anglo-American friendship—stronger, perhaps, than many people realise—which exists in the world of fox-hunting. This feeling finds expression in one of the most delightful books of its kind that I know, entitled "TRY BACK." A Huntsman's Reminiscences. By A. Henry Higginson, M.F.H. With Forewords by Henry Goodwin Vaughan, M.F.H., and Isaac Bell, M.F.H. Illustrated (Collins; 25s.). The author is an American who did much to organise fox-hunting in the States, and to introduce English methods. After many visits to this country, he has eventually settled down here since his election as sole Master of the Cattistock, in Dorset. "This is the story," he writes, "of my thirty-eight years of hunting. . . . In the telling of these incidents I have often had to 'try back,' like some hound who, in his eagerness to get for'ard, has overrun the line and cannot speak to it." The book originally appeared in America a year ago, but a special chapter has been added to this English edition which describes sport with the Cattistock during Major Higginson's first season as sole M.F.H.

I was reading the other day that there are not so many Americans hunting in England this season—a result, perhaps, of economic stress—but a perusal of this book emphasises the hope that such conditions may pass away under the new Democratic régime. Mr. Isaac Bell says in his Foreword: "I look on the author as the 'U.S. Fox-hunting Ambassador to England.' Long may he retain this post, however parties or politics may change or split. . . . It is probable that in the ages to come, in the world of H. G. Wells, when nationalities will disappear and geographical boundaries cease . . . the globe will be subdivided by tastes, occupations, and ideals, rather than by national flags. In those future ages, though it is not likely that the community of foxhunters will be the most numerous or the wealthiest, yet it will certainly be the pleasantest of all 'nations' in which to live."

One very interesting passage refers to the vicissitudes of fox-hunting during the Great War. Major Higginson recalls a dinner given in New York to Sir Charles Gunning, head of the British Remount Commission, who had come from Montreal to judge at a show of hounds. "Nothing," he says, "reflected the spirit of the meeting more plainly than the reception of the first toast, given to the hunting men of England, which was drunk in silence while the musicians played 'God Save the King.' . . . At that dinner it was voted to request our Secretary to get in touch with the Secretary of the Masters of Foxhounds Association, and advise him that the Masters in America were prepared to care for several hundred couples of hounds during the war should it become necessary to ship them out of Great Britain, and in this way preserve the best blood of the breed. As a matter of fact, the necessity for this action never arose."

Every sportsman's bookshelves, I feel sure, will contain some or all the volumes of that now standard work, the Lonsdale Library, to which has lately been added Vol. XIII., "HOUNDS AND DOGS." Their Care, Training, and Working; for Hunting, Shooting, Coursing, Hawking, Police Purposes, etc. Edited by A. Croxton Smith. With over 100 Illustrations (Seeley, Service; 15s.). The editor is supported by a very strong field of contributors, and it is noteworthy that among them are several well-known

sportswomen. Thus, for instance, the Duchess of Newcastle writes on the Borzoi and the Wire-haired Fox-Terrier; Lorna Countess Howe on the Labrador Retriever; Baroness Burton on the Cairn Terrier; Mrs. Amps on the Afghan Hound; Miss M. F. Loughrey on the Deerhound; and Mrs. Cyril Pacey on the West Highland White Terrier. Although the book is written, of course, mainly from a sporting point of view, there is much in it valuable to the ordinary dog-lover, such as the chapter on making dogs obedient, by L. H. De Pinto; or that by Mr. Henry Gray, M.R.C.V.S., on the treatment of canine diseases.

Looking up what the book has to say about two breeds with which I happen to be familiar just now, in the abodes of friends (I have given up keeping a terrier myself, as in London streets nowadays a dog's life isn't worth two hoots), I find my impressions of their characters fully confirmed. My little friend "Bob," for example, is happily

them more than works of philosophy. Alleging that this treatise has "been ignored by Greek scholars," Mr. Paget suggests: "Perhaps it may be the known dislike of the 'high-brow' for anything connected with hunting, a mania born of ignorance on the subject." As against this contention, I may point out that "the shady groves of Academe," on the high-brow banks of the Cam, have just produced a delectable work not unconnected with the pursuit of Charles James, to wit, "JORROCKS'S ENGLAND." By Anthony Steel. Fellow of Christ's College, Cambridge. With two Plates in Colour, and ten in Monochrome (Methuen; 7s. 6d.). Need I recall, too, that certain officials of the University are wont to employ as their henchmen "boys of the bull-dog breed"? On the other hand, it must be admitted that Mr. Steel refutes the idea that there is only sporting interest in the author of "Handley Cross." "His own contemporaries," we read, "were wiser. Thackeray (a close friend of Surtees) declared his power of characterisation to be the only power he envied. William Morris, 'a man who never hunted, who seldom ever rode, and to whom the life of a country house in the hunting season was not merely alien but odious . . . placed Surtees in the same rank with Dickens as a master of life.'"

With a dozen other sporting books claiming attention (apart from scores of volumes on other subjects), what can I do but enumerate them with a painful brevity far beneath their deserts? Two amusing works concerned with the humours and social side of the hunting-field are "IN THE PINK"; or, the Little Muchley Run. By Frederick Watson. Illustrated by Gilbert Holiday (Witherby; 10s. 6d.). Here we have a collection of short sketches, contrasting with a long continuous narrative, almost amounting to a novel, in "A-HUNTING WE WILL GO." By Brigadier Geoffrey Brooke. Illustrated by Captain G. H. Dixon (Seeley, Service; 10s. 6d.). Devotees of the gun will welcome a new edition of a popular book for some time out of print—"SHOOTING DAYS." By Eric Parker (Philip Allan; 12s. 6d.), illustrated with charming plates from old sporting pictures of unnamed origin. The author is a contributor to the Lonsdale Library volume mentioned above. Frequenters of the Turf will enjoy a slim little book on a big subject—"HORSE RACING THROUGH THE AGES." Some Facts and Figures. By Baroness Ernest de la Grange ("Studies" Publications (Home and Abroad); 4s. 6d.).

Now comes a group of what I might term instructional books. High qualifications and long experience belong to the author of "CROSS-SADDLE AND SIDE-SADDLE." Modern Riding for Men and Women. By E. V. A. Christy, Official Military Riding Instructor during the Great War. With Foreword by Sir Charles Frederick, Bt., sometime Master of the Pytchley, and Editor of "Foxhunting" in the Lonsdale Library. With 122 Illustrations (Seeley, Service; 12s. 6d.). Of kindred character is "SCHOOL FOR HORSE AND RIDER." By Captain J. E. Hance. With Foreword by Viscount Ebrington (London: Country Life, Ltd.; New York: Scribner; 12s. 6d.). The text is well supplemented by excellent photographs and diagrams. Sporting or domestic friends of "the friend of man" are catered for again in a new volume of the Sports and Pastimes Library—"THE ART OF DOG-TRAINING." For the House-Dog and Gun-Dog. With Notes on Field Trials, Kennel Management, Breeding, and Minor Ailments. By Leslie Sprake ("Middle Wallop"). Illustrated from Photographs (Witherby; 8s. 6d.). One breed has a book to itself in "THE IRISH SETTER." Its History, Temperament, and Training. By Leonard E. Naylor. With frontispiece by Cecil Aldin. Illustrated (Witherby; 6s.).

Finally, here is a quartet of books to which all disciples of Izaak Walton will rise—"EDWARDIANS GO FISHING"; or, Many Days on Many Waters. By Major George Cornwallis-West, Author of "Edwardian Hey-Days." Illustrated (Putnam; 10s. 6d.); "A HUMBLE FISHERMAN." Being Simple, Autobiographic Essays on the Art, Craft, and Philosophy of Fishing. By Morley Roberts. Illustrated (Grayson; 10s. 6d.); "DAYS AND WAYS OF A SCOTTISH ANGLER." By Henry Lamond, Vice-President, the Scottish Anglers' Association. Illustrated (Philip Allan; 12s. 6d.); and "CHALK STREAMS AND WATER-MEADOWS." By E. A. Barton. With twelve Photographs by the Author (John Murray; 7s. 6d.). The writer of this last book not infrequently drops into poetry. C. E. B.



THE STATUE OF LORD CARSON WHICH IS TO STAND OUTSIDE THE NEW PARLIAMENT BUILDINGS AT STORMONT: MR. L. S. MERRIFIELD, THE SCULPTOR; AND (LEFT) A SMALL-SCALE MODEL OF THE STATUE.

On pages 802 and 803 we publish photographs of the new Northern Ireland Parliament buildings. Here is shown the model for the statue of Lord Carson, the Ulster leader, which is to stand on a 20-foot pedestal outside. The figure is 12 feet high, and has yet to be cast in bronze at the foundry, a process which takes several months.

portrayed thus: "The Cairn has many qualities to make him the ideal pet for the home. He does not require a lot of exercise, and yet, if his master or mistress feels like a long tramp over the moors or fields, there is nothing he will enjoy more. They are very good guards. . . . Cairns are one-man dogs, and their devotion to their master is most touching. They are very intelligent, and it is remarkably difficult to lose a Cairn. He will always find his way home." Similarly, I am vividly reminded of my large friend, "Bill," with whom I have had swimming races in the summer sea, when I read: "The Labrador, though big, is very suitable as a house-dog, his height from the ground and his short coat allowing him to carry far less mud than many of the smaller breeds. They are dogs of naturally sweet temper and great fidelity—and, though they are good watchdogs, they are rarely aggressive or quarrelsome, comporting themselves with the quiet dignity and gentle manner that goes with their race."

Another passage that appeals to me, as a classical person, is one in Mr. J. Otho Paget's chapter on the beagle, recommending Xenophon's "Cynegeticos" ("Treatise on Hunting") as a reading book for schoolboys likely to appeal to



# Fashioned in the Days of the Builder of the Great Pyramid.

REPRODUCED BY COURTESY OF VISCOUNT ROTHERMERE, THE OWNER.



UNIQUE EGYPTIAN PORTRAIT-STATUES OF OFFICIALS OF THE FOURTH DYNASTY: FIGURES WHICH DATE FROM ABOUT 3000-2750 B.C.—FOUND IN A *MASTABA*-TOMB AND NOW ON EXHIBITION IN LONDON.

Dr. Howard Carter, of Tutankhamen Tomb fame, agrees that these two figures were fashioned in the time of King Khufu, the builder of the Great Pyramid (circa 3000-2750 B.C.). They are unique. The only statues which can be compared to them are those of Ra-Nefer in the Cairo Museum; but those are life-size and monumental, built on two slabs of stone, whereas those with which we are concerned are of smooth limestone and measure, the one 18½ inches high, the other 21½. The shorter has the flesh coloured a deep terra-cotta; the taller has the flesh coloured light brown. The difference in

coloration is taken to suggest that the first official had duties which kept him in the open air, while the second officiated in a temple or at a Royal Court. The figures were found in a *mastaba*-tomb in the Pyramid plateau; and their very existence will cause Egyptologists amazement. Old Kingdom statues in a mutilated state are rare; yet here, in a private collection, are two perfect examples of Egyptian sculpture which date back to the earliest Pyramids. They belong to Lord Rothermere, who has kindly lent them for exhibition at Spink and Son's Galleries, 5, 6, and 7, King Street, St. James's.



## Colour such as Salisbury is Recovering: Gems of Mediaeval Glass.

INTEREST in the subject of mediæval stained glass has been revived of late by the recovery, at Salisbury, of many fragments of thirteenth- and fourteenth-century glass from the Cathedral, which had been cast away into the "town ditch," or otherwise disposed of, at the so-called "restoration" in 1790. The most wonderful mediæval glass in the world is that in the Cathedral of Chartres, of which we here reproduce three typical panels. During the Great War the glass was removed to a place of safety, lest Chartres should suffer the fate of Rheims, and its temporary disappearance gave the interior something of that coldness and lack of colour which has been often adduced as a fault in Salisbury Cathedral. The windows at Chartres illustrating the legend of St. Eustace are of particular interest. That reproduced on the right above depicts a hunting scene with



THE STAG-HUNTING SAINT PURSUING HIS SPORT BEFORE HIS CONVERSION: A PANEL FROM THE "LIFE OF ST. EUSTACE" IN CHARTRES CATHEDRAL.



MEDIAEVAL GLASS AT CHARTRES: THE CONVERSION OF ST. EUSTACE—HIS VISION OF A STAG BEARING THE CROSS.

extraordinary verve and spirit; while the left panel shows the saint's conversion, by a vision of a stag with the Cross between its antlers. But numerous other saints besides St. Eustace have found a place in the windows at Chartres. As a French writer says: "There are to be found, first of all, the Apostles, the prodigious St. Thomas and *le grand baron* St. James, with the entire history of the conquest of Spain, the Crusade of Roncesvalles, and the death of Roland. Here are the great prelates, the worker of miracles, St. Martin, and the mighty St. Nicholas, patron of children. Here are the maidens, Catherine and Margaret, the knight-errant, St. Theodore, vanquisher of the crocodile in Egypt, venerable saints of the locality, and the life and death of St. Thomas of Canterbury. . . . Fantastic animals, stags that tell of the Lord, a Cross of light glowing between their antlers. But, naturally, the best loved of all these representations, and the most adored, is the lady mistress of this place, the Holy Virgin. The whole cathedral is a hymn to her glory, an immense canticle, a 'Salve Regina.' "



THE MOST VENERATED OF ALL THEMES IN THE BEAUTIFUL STAINED GLASS OF CHARTRES CATHEDRAL, WHICH HAS BEEN DESCRIBED AS A HYMN TO THE GLORY OF THE MADONNA: A TYPICAL PANEL REPRESENTING "THE VIRGIN AND INFANT JESUS."



## THE CAMERA AS RECORDER: "EVENTS" IN THE MARITIME AND ARTISTIC WORLDS.



AN ATTEMPT AT MUTINY IN A CANADIAN CONVICT PRISON NEAR MONTREAL:  
THE TAILORING SHOP FIRED BY THE CONVICTS.

A serious disturbance occurred on November 4 in the Canadian penitentiary of St. Vincent de Paul, near Montreal, when fifteen prisoners mutinied and started a fire in a tailoring shop. While the fire-brigades were getting the fire under control, the disturbances spread to the whole prison. Armed warders eventually quelled the riot.



A LINER ON FIRE IN THE TYNE: SMOKE POURING FROM THE "OREGON STAR,"  
WHOSE CHIEF OFFICER PERISHED.

A very destructive fire broke out in the Blue Star liner "Oregon Star," on November 13, at Hebburn-on-Tyne. The chief officer of the vessel perished in a courageous attempt to locate the seat of the fire in No. 1 hold. A portrait is on our Personal Page. On November 14 it was announced that material which was still smouldering, in spite of the efforts of the firemen, had broken into flames again.

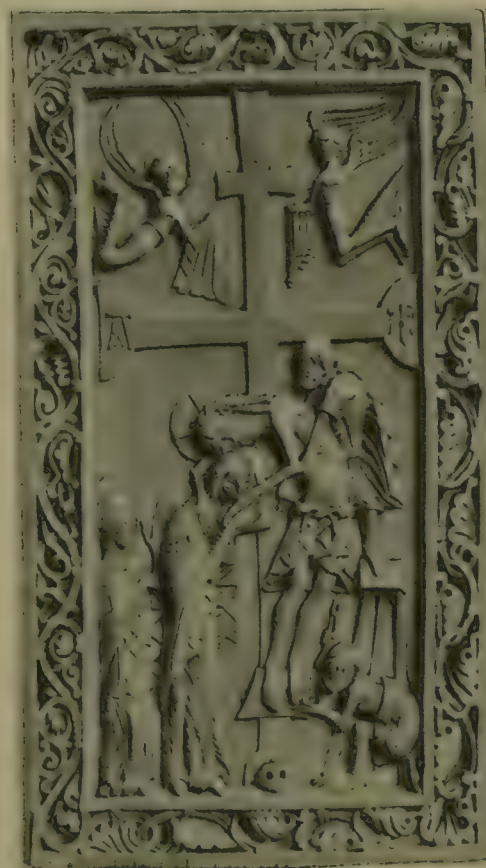
A DUTCH MAIL-STEAMER  
WHICH BECAME A TOTAL  
LOSS THROUGH FIRE: THE  
"PIETER CORNELISZON  
HOOFT" BLAZING FURIOUSLY  
IN AMSTERDAM HARBOUR.

The mail steamer "Pieter Corneliszoon Hooft" (15,000 tons), of the Nederland Steamship Company, was destroyed by fire on November 14. She was lying at Sumatra Quay, Amsterdam, with all her ports, doors, and windows open, to let out the poisonous gas used in killing the rats in her, when fire broke out and spread very rapidly. In spite of the efforts of the Fire Brigade, the vessel was gutted. She was towed to another part of the harbour, having 1000 tons of oil on board her; and continued burning.



LAST WEEK'S "TREASURE OF THE WEEK" AT THE VICTORIA AND ALBERT MUSEUM: A SKETCH OF BRIGHTON BEACH  
PAINTED BY CONSTABLE IN 1824; AND SHOWING THE ARTIST'S NATURALISTIC STYLE, WHICH INFLUENCED THE FRENCH  
IMPRESSIONISTS. (5½ IN. BY 9½ IN.)

John Constable, R.A. (1776—1837), broke away from the conventional colouring and formal composition which had characterised landscape painting up till the beginning of the nineteenth century. He was one of the first painters in oil to go direct to Nature and to put upon his canvas passing effects of light and atmosphere. In France, at the Salon of 1824, he was acclaimed with honour, and became the forerunner of the Impressionist School. His influence on French painting is apparent on a comparison of this little study of Brighton Beach (painted in 1824, looking East) with the work of Eugène Boudin.—The exceptionally beautiful relief of the Deposition from the Cross (on right) was described as Anglo-Saxon or Irish when it was acquired from the Webb Collection in 1872 (for £60 l), and it has figured in several books as a typical example of English pre-Conquest Art. It is now, however, universally recognised as of Spanish origin. Until quite recent years almost the only mediæval ivory carvings which were recognised as being Spanish in origin were the product of the flourishing school of Mohammedan carvers associated with the Court of the Caliphs of Cordova in the tenth century.



THIS WEEK'S "TREASURE OF THE WEEK"  
AT THE VICTORIA AND ALBERT MUSEUM:  
A REMARKABLE IVORY "DEPOSITION," CARVED  
IN NORTH SPAIN IN THE XITH OR XIITH CENTURY.



# THE TAKING OF PHOTOGRAPHS OF AIR-FIGHTING: CONTINENTAL PARALLELS.

As a sequel to our publication of the remarkable series of Air-Fighting photographs taken by a British pilot while actually engaged against the enemy in the air during the war (see "The Illustrated London News" of October 8, 22, 29; and November 12), we publish here details from an article by M. Henri Bouché, written for our contemporary, "L'Illustration" and printed by it in connection with its publication of photographs selected from the Cockburn-Lange Collection.

It has been asked how it came about that a pilot, engaged in rapid and fierce action, with his life in peril, could secure the necessary apparatus for taking such astonishing photographs as those of the Cockburn-Lange Collection and find opportunity to do so. Further—since cinematograph films (particularly certain American films purporting to show war-time flying) have offered to the public very plausible reconstructions of aerial warfare—it has been suggested that the Cockburn-Lange photographs are very clever "fakes."

These British photographic records are, in fact, by no means the only ones of their kind. As early as 1916, a snapshot—famous in the French Air Force—was taken in the air showing Bœlcke, in his black Fokker, sending down a Voisin artillery observation plane above Verdun. (See



FIG. 2. TAKEN IN 1916: A VOISIN TWO-SEATER FALLING IN FLAMES WEST OF VERDUN, AFTER AN ENGAGEMENT WITH THE GERMAN, BœLCKE, WHOSE FOKKER IS SHOWN AT THE TOP OF THE PICTURE. THE PHOTOGRAPH WAS TAKEN BY A FRENCH OBSERVER FLYING BETWEEN 800 AND 900 METRES FROM THE INCIDENT DEPICTED.

Fig. 2). This photograph, hitherto considered to be the most sensational of its kind, was taken on the left bank of the Meuse north of the "bois d'Avocourt," from a two-seater by the observer. In view of the fact that this observer, a specialist in aerial reconnaissance work, was using a camera with a lens of just over ten inches focal length, it is easy to calculate, by the relation of the size of the Voisin to that of the Fokker as registered on the photograph, that the two-seater with the camera was about one kilometre away from the machine in flames and its adversary (Fig. 2). Thus, at a distance which was not that of a combatant, but that of an observer, the employment of a lens of long focal length made it possible to get a poignant souvenir of the air fight in which this machine met its end.

In the case of an air-fight at short range, in which the pilot of a single-seater fighter had had the luck to come off victorious, it might be thought that the use of an ordinary pocket-camera would make it possible to get valuable evidence and to bring back "souvenirs." Many air-fighters thought so, and Guynemer, for one, took photographs of this kind (Fig. 1). Since the publication of the Cockburn-Lange photographs, Guynemer's albums have been consulted, as his family—acting on his wishes—arranged the photographs that he brought back from the front. A great number of these photographs were taken during air-fights by Guynemer, who, at the beginning of 1917, mounted a little pocket



FIG. 1. GUYNEMER'S PHOTOGRAPH OF A GERMAN ALBATROSS; TAKEN DURING AN AIR FIGHT IN 1917 WITH A SMALL CAMERA OF THE POCKET TYPE, WHEN THE AIRMAN WAS FIFTY FEET FROM HIS ADVERSARY.

roll-film camera on his machine. This he set beforehand—just as the British pilot did—and was able to make an exposure at any opportune moment. The exposure was not linked with the firing of his machine-guns; but, on the other hand, it is clear from Guynemer's album that he was able to take several photographs in the course of the same flight—in contrast to the British pilot, who could take only one picture during each flight. These photographic records by Guynemer are stirring on account of the great name they recall. Many are signed by Guynemer and certified by Brocard, his commandant.

Unhappily, their photographic quality is poor; since, having been taken at a very short distance, they were made with a lens of short focal length and of moderate aperture, and with a shutter with speeds only suitable for ordinary use on the ground. We reproduce the best photograph by Guynemer, who stated that it was taken while he was 15 metres from his opponent. In this case, the picture of the enemy plane on the original negative



FIG. 4. A GERMAN PISTOL-CAMERA OF THE TYPE BELIEVED TO HAVE BEEN USED (AFTER ADAPTATION) BY THE BRITISH PILOT WHOSE PHOTOGRAPHS ARE IN THE COCKBURN-LANGE COLLECTION.

measures 20 millimetres: it results, therefore, that if 9 metres is allowed for the spread of the wings of the German aeroplane, and if the shortening by perspective is taken into account, the photographic camera used had a lens of a few centimetres focal length, which corresponds to that of a small pocket-camera.

The British pilot, like Guynemer, "worked" at very short distances, rendered necessary whenever an aerial duel took place. But, in contrast to Guynemer, he had at his disposal a camera with a lens of long focal length, taken from a German two-seater which had fallen into the British lines and he adapted it as well as could be managed to this new use. According to the British pilot's diary, this camera must have been one of those which the observer of a German two-seater held by a handle in front and by the butt-end, where the trigger of the shutter was situated (Fig. 4). It was aimed like a pistol and would have weighed about ten pounds. The focus of the lens measured probably about ten inches; the shutter permitted very rapid exposures; and the lens had a very large aperture—a combination

making for great efficiency. In the original negatives (measuring 9 by 12 centimetres) of the Cockburn-Lange collection, German aeroplanes having a wing-spread varying from 8 to 12



FIG. 3. A GERMAN BIPLANE PHOTOGRAPHED IN 1916 BY A BELGIAN AVIATOR WHO WAS USING A CAMERA FITTED WITH A LENS OF 20 INCHES FOCAL LENGTH.

metres, give a picture which sometimes shows a wing-spread measuring 6 centimetres, from which it can be deduced that the British pilot was at a distance of 30 or 40 metres from them. At this distance, however, the picture is rarely clear: the aeroplanes whose details are most clearly seen are those which are at a distance of 60 or 80 metres. It may be concluded, therefore, that the Cockburn-Lange photographs are compatible with the technique then in use. Still larger images of enemy aeroplanes were recorded on photographic plates during the war, especially by Belgian crews, observers of which used cameras with a lens of 20 inches focus (see Fig. 3).

Can one doubt, therefore, that a pilot in actual combat could take, in such tactical conditions, photographs of the nature of those in the Cockburn-Lange collection? Here Guynemer's example is definite, as he exposed at a distance of 15 metres and with a less efficient camera. The British pilot, it is true, pulled the trigger of the camera simultaneously with the trigger of his machine-gun; whereas the photographic action on Guynemer's plane was distinct from the firing control, and the pilot had a free hand to operate the shutter by means of a "bowden"-wire which hung from the little camera fixed to one of the struts. Guynemer was not entirely satisfied with the negatives he took in this way, and, according to M. Bozon-Verduraz, who was his companion in his patrols up to the last day, he studied and was perfecting—when he was killed—a telephotographic automatic camera with which he hoped to be able to register the destructive results of a new aeroplane gun.



## OF ARCHITECTURAL AND HUMAN INTEREST: NEW BUILDINGS ROYALLY OPENED; AND A MEMORIAL.



THE PRINCE OF WALES'S VISIT TO OXFORD: HIS ROYAL HIGHNESS WALKING IN PROCESSION FROM WORCESTER COLLEGE WHEN ON HIS WAY TO OPEN THE EXTENSION OF THE TAYLOR INSTITUTION, THE HOME OF THE FACULTY OF MODERN LANGUAGES IN THE UNIVERSITY.



THE DUKE AND DUCHESS OF YORK IN SOUTHAMPTON: THEIR ROYAL HIGHNESSES AT THE OPENING OF THE MUNICIPAL OFFICES SECTION OF THE NEW CIVIC CENTRE. The Duke and Duchess of York visited Southampton on November 8. There the Duke opened the door of the Municipal Buildings of the Civic Centre, which will include, eventually, Law Courts, an Assembly Hall, an Art Gallery, and a School of Art. Their Royal Highnesses afterwards visited the new dock works, and, among other things, noted the methods adopted to reclaim four hundred acres of land from the sea.



A MEMORIAL TO HORSES AND OTHER ANIMALS KILLED IN THE GREAT WAR: THE SCULPTURE INAUGURATED BY FRANCES COUNTESS OF WARWICK, AT THE R.S.P.C.A. DISPENSARY.

On November 10, this memorial to horses and other animals which gave their lives in the Great War was inaugurated by Frances Countess of Warwick. It is by Mr. F. Brook Hitch, of Hertford, and is on the façade of the R.S.P.C.A. Animal War Dispensary, Cambridge Avenue, Kilburn.



THE PRINCE OF WALES'S VISIT TO OXFORD: HIS ROYAL HIGHNESS AT MAGDALEN COLLEGE—SPEAKING IN FRONT OF THE NEW UNDERGRADUATES' LIBRARY HE OPENED.

The Prince of Wales visited Oxford on November 9, to inaugurate the extension of the Taylor Institution, which is the home of the Faculty of Modern Languages in the University. Having lunched with the Vice-Chancellor at Worcester College, his Royal Highness went in procession to the new gate of the Tylorian, where he opened the door with a golden key. In his speech he emphasised the need for knowledge of modern languages. After this ceremony he drove to Magdalen—his old college—there to open the undergraduates' Library and the new Long Wall Quadrangle. His Royal Highness was received at the entrance in Long Wall Street.



THE QUEEN AT THE OPENING OF THE NEW RESIDENTIAL HALL FOR WOMEN STUDENTS OF LONDON UNIVERSITY—COLLEGE HALL, MALET STREET, W.C.1: HER MAJESTY LISTENING TO THE ADDRESS BY SIR ALEXANDER GIBB.

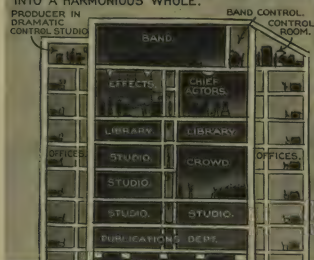
On the occasion illustrated, which was on November 10, her Majesty was received by her brother, the Earl of Athlone, Chancellor of London University, who is seen at her left hand in the photograph, and by Princess Alice, Countess of Athlone, President of the Women's Jubilee Committee, who is seen at her right hand. She opened the main entrance to the new building with a golden key. In the hostel 112 students will have a study-bedroom apiece, and there is a dining-hall with seating accommodation for 120. Other amenities include a library, an excellently bright common room, a studio, and a students' laundry; while the flat roof affords facilities for certain forms of recreation. Sir Alexander Gibb is Chairman of the Council.



# INTRODUCED TO THE PRINCE OF WALES: THE "INFANT PRODIGY" WITH FIVE MILLION LICENSED LISTENERS.

Drawn by Our Special Artist, G. H. Davis, from Information Supplied by the British Broadcasting Corporation

IN PRODUCING A PLAY SEVERAL STUDIOS ARE USED & THE SOUNDS PRODUCED FROM EACH ARE SCIENTIFICALLY MIXED BY THE PRODUCER INTO A HARMONIOUS WHOLE.



NOTE: THE ECHO STUDIOS ARE SITUATED IN THE BASEMENT.



THE CHIEF FACTORS ARE SPEAKING THEIR PARTS IN ONE STUDIO.

ANOTHER STUDIO CONTAINS THE ORCHESTRA SUPPLYING THE MUSICAL BACKGROUND.



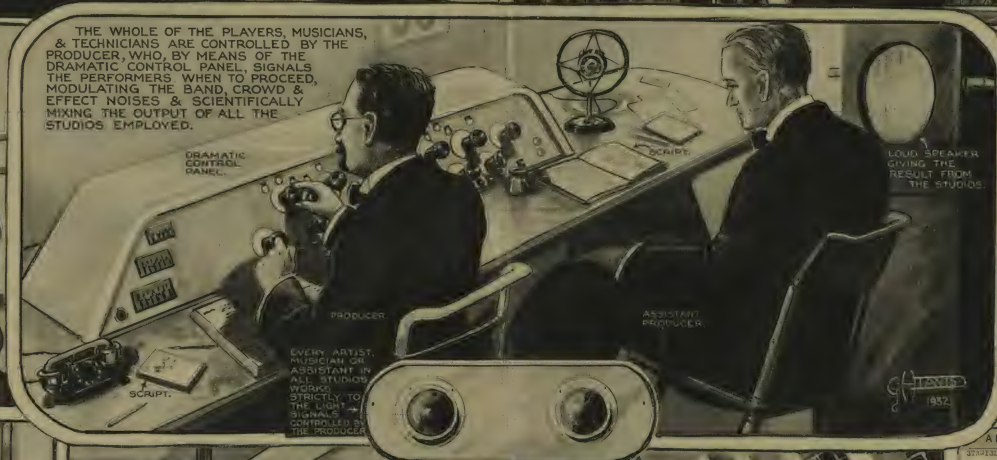
THE MUSIC BEFORE GOING TO THE PRODUCER'S PANEL IS BALANCED & CONTROLLED BY AN EXPERT.



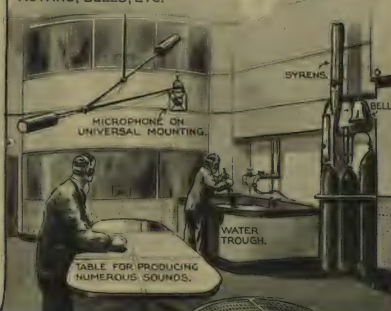
FROM YET ANOTHER STUDIO COME THE NOISES OF A CROWD.



THE WHOLE OF THE PLAYERS, MUSICIANS, & TECHNICIANS ARE CONTROLLED BY THE PRODUCER, WHO, BY MEANS OF THE DRAMATIC CONTROL PANEL, SIGNALS THE PERFORMERS WHEN TO PROCEED, MODULATING THE BAND, CROWD & EFFECT NOISES & SCIENTIFICALLY MIXING THE OUTPUT OF ALL THE STUDIOS EMPLOYED.



THE EFFECTS STUDIO SUPPLIES OTHER SOUNDS SUCH AS RUNNING WATER, HOOFS-BEATS, SHIPS' SYRENS, ROWING, BELLS, ETC.



FROM THE GRAMOPHONE EFFECTS STUDIO COME OTHER SOUNDS SUCH AS THE RUSH OF AN EXPRESS TRAIN, REAL GUNFIRE, ETC., ETC.

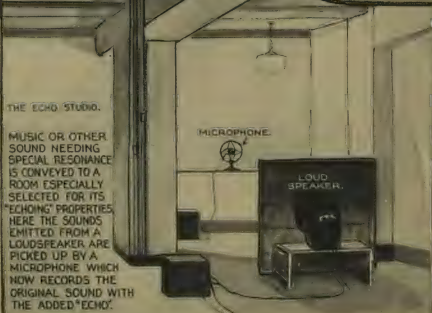


THE ECHO STUDIO.

MUSIC OR OTHER SOUND NEEDING SPECIAL RESONANCE IS CONVEYED TO A ROOM ESPECIALLY SELECTED FOR ITS "ECHOING" PROPERTIES. HERE THE SOUNDS EMITTED FROM A LOUDSPEAKER ARE PICKED UP BY A MICROPHONE WHICH NOW RECORDS THE ORIGINAL SOUND WITH THE ADDED "ECHO".

MICROPHONE.

LOUD SPEAKER.



IN THE CONTROL ROOM THE OUTPUT OF THE STUDIOS IS SCIENTIFICALLY PROPERLY MIXED & TECHNICALLY CONTROLLED IS SENT BY LAND-LINE TO THE TRANSMITTING AERIALS.

A PAGE OF THE SCRIPT OF A PLAY WITH STUDIO NUMBERS MARKED

STUDIO 1: You don't sleep enough - that's what's wrong with you, my dear Paul. A week ago we were dancing in Paris. I beg his pardon - Paris. I beg.

STUDIO 2: Now.

STUDIO 3: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 4: It's a century ago. I've forgotten how to dance by now. I've forgotten all my partners.

STUDIO 5: (Laughing) Hard-hearted tourist! I haven't.

STUDIO 6: (Laughing) Then you'd better. Sentimental! (Sings: "The Hoofs-beats") Oh! What's that?

STUDIO 7: Nothing.

STUDIO 8: (The hoofs-beats on. Suddenly a "Hoofs-beats" fades in.)

STUDIO 9: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 10: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 11: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 12: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 13: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 14: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 15: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 16: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 17: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 18: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 19: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 20: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 21: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 22: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 23: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 24: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 25: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 26: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 27: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 28: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 29: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 30: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 31: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 32: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 33: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 34: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 35: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 36: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 37: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 38: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 39: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 40: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 41: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 42: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 43: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 44: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 45: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 46: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 47: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 48: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 49: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 50: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 51: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 52: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 53: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 54: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 55: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 56: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 57: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 58: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 59: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 60: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 61: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 62: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 63: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 64: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 65: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 66: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 67: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 68: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 69: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 70: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 71: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 72: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 73: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 74: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 75: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 76: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 77: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 78: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 79: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 80: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 81: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 82: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 83: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 84: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 85: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 86: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 87: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 88: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 89: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 90: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 91: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 92: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 93: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 94: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 95: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 96: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 97: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 98: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 99: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

STUDIO 100: (Behind the hoofs-beats "Ride of the Valkyries" fades in very softly. The hoofs-beats continue steadily. The hoofs-beats are now.)

THE PLAY IS NOW BROADCAST FROM THE TRANSMITTING AERIALS.



## THE B.B.C. DECENNARY: HOW A BROADCAST PLAY IS ASSEMBLED FROM STUDIOS IN WHICH IT IS PRODUCED PIECEMEAL AND IS RADIATED AS A WHOLE: THE CONTROLLER AND HIS "WEB" OF ACTORS, EFFECTS, MUSIC, AND ECHOES.

The Prince of Wales arranged to visit Broadcasting House, on November 15, to address listeners and attend the broadcasting of a special variety entertainment planned as an item in the week of celebrations (from November 13 to 17) of the tenth anniversary of that "infant prodigy" of entertainers, the B.B.C. Probably few among the millions who listen nightly to plays and musical items transmitted from Broadcasting House have any conception of the methods employed. We show here how a play is "put on the air." The players have had six or eight rehearsals before the play is broadcast. The Dramatic Control Room has a panel with numerous knobs and switches for sending light signals to the various

studios engaged. Before it sits the Producer with the script, and a microphone adjacent so that he may talk to each studio. A loud-speaker reproduces all sounds made in the various studios. The Producer is a "mixer," mixing sounds as ingredients, as a painter mixes pigments. This particular play is possibly using six studios. In one are leading players, in another the "crowd," and in another the band to supply incidental music (which has its own expert in his own room listening and correcting the tone). Elsewhere are the Effects Studio, for supplying incidental "noises," and, adjoining the Gramophone Effects Studio, to supply other sounds by appropriate records. In the basement is the

Echo Room, to give resonance when required. The Producer controls all these studios by light signals—the flashing of a green lamp—which tell the actors to proceed. The Producer's hand moves constantly over the dial and switches. He raises the tone of one actor and reduces those of another; brings in the musical background; mixes in hoofs-beats or the roar of an express train from the Effects Studio, and adds the cheers or shouting of the crowd. It all goes out to the listeners as one harmonious and well-balanced whole. The actors sit near the microphone, and at the call of the signal-lamp read their parts from a script, in well-rehearsed dramatic tones but, of course, without dramatic action. The "crowd" lounge in chairs awaiting their "cue," ready to become a "menacing mob," a "patriotic populace cheering the King," or a "blood-thirsty gang of savages." Elsewhere is the orchestra, with a microphone suspended above the conductor's head, ready to participate. Finally, in the Control Room under the roof, the engineers regulate the sounds as "mixed" by the Producer and send them in electrical impulses over land-lines to the transmitting station—Brookman's Park, Daventry, or other B.B.C. station. From the high aerials these electrical impulses, borne on the radio "carrier" wave, are shot into space for interception by millions of listeners. So complex an affair is the production of a broadcast play.

lounge in chairs awaiting their "cue," ready to become a "menacing mob," a "patriotic populace cheering the King," or a "blood-thirsty gang of savages." Elsewhere is the orchestra, with a microphone suspended above the conductor's head, ready to participate. Finally, in the Control Room under the roof, the engineers regulate the sounds as "mixed" by the Producer and send them in electrical impulses over land-lines to the transmitting station—Brookman's Park, Daventry, or other B.B.C. station. From the high aerials these electrical impulses, borne on the radio "carrier" wave, are shot into space for interception by millions of listeners. So complex an affair is the production of a broadcast play.





## THE WORLD OF SCIENCE.



### A PLEA FOR THE LAPWING.

By W. P. PYCRAFT, F.Z.S., Author of "Camouflage in Nature," "The Courtship of Animals," "Random Gleanings from Nature's Fields," etc.

THE Bird Protection Societies of Dublin, and of London, are, and with good reason, greatly perturbed about the slaughter of lapwings which is taking place in Ireland for marketing purposes. And I have been asked to confirm their contentions that this slaughter, though it may bring profit to a few individuals, is excessively harmful to the community at large, and especially to farmers. Need I say that I am something more than willing to do my best in this cause, especially since reduction of the numbers of these most valuable birds affects, eventually, not merely Ireland, but the whole of the British Islands.

Although protected in Ireland by legislation, this protection is being flouted by those interested in the marketing. They contend that, since the lapwing lives only by "suction," their exploitation can do no harm. Doubtless those who use this argument believe it, for there is a widespread belief that snipe and woodcock also contrive to live after this strange fashion. Hence the custom of cooking woodcock with the "trail." Did the partakers of such feasts realise that worms and other very solid matter, in large quantities, are consumed to satisfy their very natural hunger, this nasty custom would promptly cease.

But what does the lapwing feed on? Always I prefer to get my facts at first-hand rather than from books, in so far as this is possible. And so I have made a very thorough examination of the contents of the gizzards of a number of freshly killed birds which, I am told on good authority, came from Ireland. Confirmation of this assurance comes from the fact that none of the birds had been shot. They had been killed by wringing the neck, herein confirming the statement that they had been netted. In three cases the gizzard was empty, save for a few stones swallowed to furnish the "gastric mill" whereby the food is broken up before being passed on to the intestine for digestion. Six contained numerous wire-worms, both adults and larvæ, as well as fragments of other beetles and seeds of various kinds, chiefly polygonum. One contained fragments of beetle and a small tuft of rootlets, entangled in which were several living specimens of *Lumbricillus lineatus*. These are minute, transparent, thread-like worms.

The presence of "wire-worms"—which are larval stages of a beetle—as well as of the adults, is alone sufficient to prove that these birds are of enormous

liver-rot in sheep; but this I failed to do. But the Ministry of Agriculture and Dr. Collinge are both emphatic on the first-rate importance of this bird in keeping down this scourge. That I found none in the stomachs that I examined may be due either to the fact that the birds may not have been feeding near water—and the number of wire-worms I found support this—or these snails may now be hibernating. He has repeatedly found these snails. The story of the liver-fluke should be much more widely known. But it is so strange and complicated that I will not spoil it by attempting to tell it now.

the country-side, but they are, furthermore, servants of the State whose places can never be filled. Their extermination, indeed, will bring in its train a heavy retribution.

To urge that in the present distressful circumstances men should be allowed to make a living by netting lapwings is to urge a policy of folly. Ask these men to hunt for wire-worms or the fluke-infested snails, and they will refuse. It would be a fearsome task. Instead we are to concede them the right to wipe out the birds that are doing it, and most efficiently. This plea for the lapwing is no alarmist scare. For generations their eggs have been collected in tens of thousands. This in itself has imposed a severe strain on the birds. But besides this, drainage, extended agriculture, and the encroachment of towns have rapidly constricted their breeding grounds.

From every part of the British Islands we have the same tale—the birds are far less numerous than they once were, and their numbers are decreasing with a disconcerting rapidity. How much longer shall we adopt a policy of "masterly inactivity"? Even if plovers' eggs or plovers' flesh were a dire necessity for the well-being of the nation, we should still have to consider drastic measures of protection. Food for the many they most emphatically have never furnished: their aid in clearing the land of insect-pests and fluke-pests, on the other hand, is of immense importance. Are they to be thrown to the wolves, and their beneficent work suppressed, because those who govern us "can't be bothered with such trifles"?

Apart from the matter of its food, there are one or two other aspects of the lapwing that do not seem to be generally known. Seen in the field—with a pair of field-glasses—the male may be distinguished by his longer crest. But few people seem to know that the moment they mount into the air the males can be picked out from the flock at once. And this on account of the conspicuously greater length and breadth of the primaries, or outermost quill-feathers. A glance at the accompanying photographs will make this apparent at once. But it is not only the primaries which are different. It will be noticed that the secondaries, or quills of the fore-arm, are longer, broader, and more truncated than in the female. I can call to mind no similar case among birds. Nor can I suggest any factor which may have brought about this difference, unless it be the



THE HEAD OF THE MALE LAPWING (RIGHT) AND THE FEMALE COMPARED: THE DIFFERENCE BETWEEN THE TWO SEXES MARKED BY THE GREATER ERECTILE CREST IN THE MALE.

In the field these birds appear as black and white. But examined closely, the upper parts of the plumage are found to be of a beautiful dark metallic green, glossed with bronze and purple, while the crest, throat, and fore-part of the breast are black. There is also a conspicuous patch of white on the lower part of the back, while the under tail-coverts are cinnamon-coloured.

One would have supposed that the farmers, with their numerous chambers and clubs, would at least have acquired some practical acquaintance with the theme of the food of birds. Yet they have little but ancestral prejudices to offer when questioned on this matter, wherein they agree with the game-keeper and the gardener. The Royal Society for the Protection of Birds, to which we owe vastly more than the general public realises, has long urged, in season and out of season, that the lapwing and its eggs should be absolutely protected the whole year round. And to this end it should be made an offence to offer them for sale in shops.

by his longer crest. But few people seem to know that the moment they mount into the air the males can be picked out from the flock at once. And this on account of the conspicuously greater length and breadth of the primaries, or outermost quill-feathers. A glance at the accompanying photographs will make this apparent at once. But it is not only the primaries which are different. It will be noticed that the secondaries, or quills of the fore-arm, are longer, broader, and more truncated than in the female. I can call to mind no similar case among birds. Nor can I suggest any factor which may have brought about this difference, unless it be the



ONE OF THE MOST REMARKABLE FEATURES OF THE LAPWING, A BIRD WHICH FARMERS CAN ILL AFFORD TO LOSE, AS IT PERFORMS MOST VALUABLE SERVICES IN DESTROYING WIRE-WORMS AND OTHER PESTS: THE DIFFERENCE BETWEEN THE WING OF THE MALE BIRD (LEFT) WITH LONG PRIMARIES, OR OUTERMOST FLIGHT-FEATHERS, AND THAT OF THE FEMALE BIRD (RIGHT) WITH DISTINCTLY SHORTER ONES.

This difference in the formation of the wings of the male and female birds is apparently without parallel, and during flight the males may easily be recognised by their larger wings. It is suggested that the difference may possibly be due to stimuli set up during the curious "courting flight."

service to the farmer, for the wire-worm is a most destructive pest. Dr. Walter Collinge, who speaks with authority on all that concerns the food of birds, found also larvæ of the crane-fly, or leather-jacket, slugs of two species, seeds of the buttercup, remains of earth-worms, and a bit of grass. I hoped to find *Limnea truncatula*, the small fresh-water snail which serves as host to the deadly liver-fluke, which causes

Plovers' eggs and quails, at any rate till recently, were forced upon us all, in their season, and very delicious morsels one found them. Yet surely, as soon as it is shown that in partaking of such luxuries we are ensuring the doom of two types of birds which can ill be spared, no hand will be raised in protest when their absolute protection is demanded. For not only do they add greatly to the delights of

stimuli set up during the curious and remarkable "courting flight," which I must reserve now for description on another occasion.

There is but little difference in the rest of the plumage between the two sexes, but the erectile crest is decidedly longer in the male. It has been stated that the beak is longer in the female than in the male. But this is of no value as an indication of sex.



## A WINDOW ON THE WORLD: EVENTS OF THE WEEK ABROAD.



AN IMPOSING DISPLAY OF RUSSIAN MILITARY FORCE TO CELEBRATE THE FIFTEENTH ANNIVERSARY OF THE FOUNDATION OF THE SOVIET RÉGIME: THE GREAT PARADE OF FIFTY THOUSAND TROOPS OF THE RED ARMY BEFORE THE TOMB OF LENIN IN RED SQUARE, MOSCOW, IN THE PRESENCE OF M. STALIN, THE PRESENT SOVIET DICTATOR, M. VOROSHILOV, COMMISSAR FOR WAR, AND OTHER MEMBERS OF THE SOVIET GOVERNMENT.

The fifteenth anniversary of the Bolshevist Revolution in Russia was celebrated on November 7, on a scale of unusual impressiveness. This occasion was regarded as a special landmark in Soviet history, since the fifteenth anniversary coincided very closely with the end of the first Five Year Plan and the beginning of the second. In view of the present stringency of food, which may become more acute during

the winter, the authorities, it is suggested, were naturally anxious to encourage the spirit of the people by organising huge mass demonstrations. The public squares of Moscow were decorated, by the best artists available, with exhibits illustrating such subjects as the world movement of Communism, the growth of Soviet industries, and the development of Moscow as an air-port.



A DISASTER TO THE MELANESIAN MISSION: ITS NEW YACHT, "SOUTHERN CROSS," RECENTLY WRECKED ON AN ISLAND OF THE NEW HEBRIDES.

The new mission ship, "Southern Cross VI," bound from New Zealand to the Solomon Islands on her first voyage, was wrecked on November 2 on Anaitum, an island of the New Hebrides. The crew landed safely, but the ship broke up on a reef and became a total loss. She was a 220-ton steam-yacht, built at Cowes, and cost, with equipment, about £25,000. Only last July she was dedicated off Greenwich by the Archbishop of Canterbury.



THE DESTRUCTION OF 15,000,000 DUTCH HYACINTH BULBS BECAUSE OF OVER-PRODUCTION: FILLING A PIT WITH BULBS TO BE BURNT, IN HOLLAND.

Dutch bulb-growers recently agreed to destroy fifteen million hyacinth bulbs, enough to fill 30,000 baskets, on account of over-production. The new British import duties, it is said, have had an adverse effect on the trade, as this country was formerly one of their best customers. Our photograph was taken at Hillegom, in Holland, where the bulbs were emptied into a huge pit to be burnt. The scene recalls the destruction of coffee in Brazil.



THE SCENE OF A COMMUNIST RIOT AT GENEVA, WHERE TWELVE PEOPLE WERE KILLED WHEN TROOPS FIRED: THE SQUARE NEAR EXHIBITION HALL.

Serious rioting occurred in Geneva on November 9, when two people were killed and ten others died later, as a result of clashes between troops and the mob. About fifty others were injured, and fifteen soldiers badly wounded. The trouble began with an attempt by Communists and Socialists to enter a Nationalist meeting called to arrange legal proceedings against certain Communist agitators. A mob near the Exhibition Hall attacked the police, who were almost overpowered when a company of infantry



A TYPICAL INCIDENT DURING THE RECENT COMMUNIST DISTURBANCES IN SWITZERLAND: STEEL-HELMETED SOLDIERS MOVING-ON A GROUP OF DEMONSTRATORS IN GENEVA.

arrived. The crowd turned on the soldiers, who were young recruits, seized and threw away helmets, and broke rifles. The soldiers took shelter in front of the Hall, where they were pelted with stones and missiles. Another company, with a machine-gun, then fought its way through, and, after a bugle signal and three warnings, which were disregarded, opened fire, whereupon the mob quickly dispersed. The authorities took drastic measures to prevent further disorder, and many Communists were arrested.



# PERSONALITIES OF THE WEEK: PEOPLE IN THE PUBLIC EYE.



LADY KINDERSLEY.

Chairman of the committee organising a Christmas Market at the Dorchester on November 22 and 23, in aid of the Elizabeth Garrett Anderson Hospital, which is appealing for £4000.



MR. F. D. YATES.

Six times British chess champion, the last occasion being in 1931. Died November 11; aged forty-five. One of the small band of English players to attain undoubted master rank at the game.



THE NEW LORD MAYOR OF LONDON AND THE SHERIFFS: SIR PERCY GREENAWAY (THIRD FROM LEFT) AND THE LADY MAYORESS (CENTRE) IN A GUILDHALL GROUP.

In this photograph, which was taken at the Guildhall, are seen Mr. W. Lacon Threlford and his mother, Mrs. Threlford, on the left; and Mr. C. H. Collett and Mrs. Collett on the right. Sir Percy Greenaway was installed as Lord Mayor of London on November 8, and the Lord Mayor's Show was held on the following day. The main exhibit of the Show was a procession of cars illustrating the development of the printing industry.



MR. VASS HAMILTON.

Chief officer of the Blue Star liner "Oregon Star," on which fire broke out at Hebburn-on-Tyne on November 13. Perished in attempting to locate the seat of the fire in No. 1 hold.



MR. HYLTON STEWART.

Organist of St. George's Chapel, Windsor Castle. Died November 14; aged forty-eight. Succeeded Sir Walford Davies as organist last September. Had formerly been organist at Rochester Cathedral and Chester Cathedral.



MRS. J. A. MOLLISON.

Left Lympe on November 14 in an attempt to break the record for the flight to Capetown held by her husband with 4 days 17 hours 22 minutes. Mrs. Mollison (formerly Miss Amy Johnson) set out in a Puss Moth cabin aeroplane fitted with a 130-h.p. engine.



VISITING BELFAST FOR THE OPENING OF THE NEW PARLIAMENT BUILDINGS: LORD CARSON AND LADY CARSON; WITH SIR WILLIAM HUNGERFORD AND HIS DAUGHTER (LEFT); AND CAPTAIN ARBUCKLE, OF THE "ULSTER MONARCH" (RIGHT).

Lord Carson, with Lady Carson, is shown on board the "Ulster Monarch," in which the old Ulster leader arrived in Belfast for the opening of the new Northern Ireland Parliament buildings. On another page we reproduce a photograph of the statue of Lord Carson which is to stand outside the new Parliament House.



MME. STALIN.

The wife of the Soviet dictator, Nadejda Sergeyevna Alleluya, died suddenly from an unknown cause on November 8. She was the daughter of an Ossetian revolutionary, and was married to Stalin in the Caucasus in 1919, when she was seventeen. She seldom appeared in public.



SIR DUGALD CLERK.

Famous as an inventor and engineer. Died on November 12 in his seventy-ninth year. His best known researches had been connected with internal-combustion engines, and with gaseous fuel and gas lighting and heating. He was created K.B.E. in 1917, and was an F.R.S.



THE FIRST WOMAN TO PRESIDE AT THE NEWSVENDORS' ANNUAL DINNER: MISS ALICE M. HEAD.

The Newsvendors' Benevolent and Provident Institution, a charity which has been in existence for ninety-three years, had a woman president at its annual dinner for the first time in its history. Miss Alice M. Head arranged to fill this rôle at the Connaught Rooms on November 15.



MR. JOHN GALSWORTHY.

Awarded the Nobel Prize for Literature for 1932 by the Royal Swedish Academy. The value of the prize this year is over £9000. Has just published a new novel, "Flowering Wilderness," in which many of the same characters appear as in "Maid in Waiting."



# The Same Safe Old Stimulant



"My stand-by for over 50 years - Dewar's"





By Appointment to  
H.R.H. The Prince of Wales.



**REALISING**, as you must, that in these days to own a Morris is to own a strikingly beautiful car; realising that every feature of Morris construction is there only because it is *proved*; realising that there's little indeed Morris don't know about comfort and convenience . . . realising all this, you'll discover also that when Morris talk of car value they mean something even bigger than that sadly overworked word is usually understood to convey. (Remember, too, that Morris cars are just as happy overseas as on home service.)

The Morris range comprises 8 distinct chassis types and gives a choice of 30 body styles at prices ranging from £100—£395.

# MORRIS

MORRIS MOTORS LIMITED, COWLEY, OXFORD



# The World of the Kinema.

By MICHAEL ORME.

## RIISING STARS.

THE turn of the tide in the British film industry may be, in so far as the tremendous work of preparation and reorganisation is concerned, an affair of yesterday. An alliance such as that of the British-Gaumont and the Ufa Studios, the opening up of avenues to the internationalisation of pictures, the steady advance in technical efficiency and mechanical equipment, are not arrived at overnight. But the effect on our films reached its full significance with their introduction to the public, and is of sufficiently recent date to quicken our "movie business" with a new element of surprise, a new impetus, an atmosphere charged with expectation. The flood-tide is moving, gathering momentum, bringing with it a lusty young breeze to blow us out of the doldrums and to whip up the whole industry to a state of healthy activity, a state in which it is no longer sufficient to recognise shortcomings, but in which something is—sometimes—actually done about it. Take, for instance, the vexed question of our stars, or, rather, our comparative lack of them. It has been discussed in print and in private, desperately or philosophically, since the first palmy days of the silent era. We have protested, again in print and in private, when the best of the few we possessed were allowed to slip through our fingers at the call of Hollywood. We shall go on protesting, for we still allow them to escape, but now, at any rate, the conditions in British studios hold out a bait for their recapture. The powers behind the screen have at length awakened to the fact that a star is not "a piece of material to be used willy-nilly in a series of jobs of work," to quote the words of Miss Madeleine Carroll in an illuminating article on her "come-back" to films appearing in the *Film Weekly*. The star-building system of Hollywood, with its careful study of individualities, its equally intensive nursing of the potential leading actor or actress, cannot be avoided in a medium so exacting as that of the kinema. The haphazard methods of flinging a screen favourite into a number of parts, not all of them suited to his or her personality, was a serious stumbling-block in the expansion of our film industry. More talent had to be found and fostered, employed with greater discrimination and with greater persistence. To-day you may not only enjoy being in at the start of a new career with reasonable certainty of that career being carefully developed, but, thanks to the new awareness amongst the film-makers, vehicles are sought out to carry a star with exhilarating speed into the Seventh Heaven of success.

Thus did Miss Jessie Matthews, in "There Goes the Bride," prove herself beyond all doubt an accomplished screen comédienne, with a definite style of her own, and a grace of movement admirably suited to kinematic requirements. Her instant success synchronised with that of

her husband's, Mr. Sonnie Hale, whose airy impudence—or shall we call it "London Assurance"?—adds the *sauce piquante* to the comedy situations in "Tell Me To-night." The same Gaumont-British-Ufa picture brings to the fore yet another stage favourite, Miss Athene Seyler, a brilliant actress in her own line, drawing her character-sketches with the clean-cut edges of a cameo, and endowed with a delicious sense of humour.

Though several leaders of the theatrical profession have turned their attention from time to time to the shadow drama of the screen, it is the recent artistic and intelligent development of our films that has gained their full support, and certainly only recently that the casting directors of the studios have begun to realise the rich resources of the theatre world. Some of our stage artists are by now as firmly established in the affections of the public as any of the Hollywood film-stars—no need, therefore, to recite their names. But in their wake a fresh contingent is on the march. That contingent is our immediate concern, the concern of all who look to the future of British films. Ardent filmgoers will probably have compiled their own lists of careers worth watching. I feel inclined to head mine with the name of Mr. Emlyn Williams, who, after repeating his fine stage study of latent madness in the screen adaptation of "The Case of the Frightened Lady," gave us a taste of his versatility in his good-humoured portrayal of a rich store-owner's son in Miss Leontine Sagan's "Men of To-morrow." He has the creative mind, enriched with the imagination of his Welsh ancestry, and finding in its humorous expression the wistful undercurrent of a sensitive artist. He has emotional powers and can keep

tion in the near future. He handles the part of a nice-minded young bank clerk who yields to sudden temptation with an attractive simplicity. An excellent portrayal, natural and frank. The picture also introduces a "discovery" on the distaff side in the person of Miss Pearl Argyle. Trained as a dancer, and at the present moment a member of Mr. C. B. Cochran's Trocadero company, Miss Argyle plays the heroine in "That Night in London"—her first appearance on the screen, by the way—with astonishing poise. She photographs extremely well, and surrounds the character with a certain air of mystery, of romance, and temperamental depths. Yet hers is no slavish imitation of the Dietrich-Garbo school, for she has a youthful tenderness that comes to the surface in her love-scenes. Her possibilities are obvious and should carry her far. She seems to me to have a more decided personality than either of the charming young ladies "found" by Mr. Alexander Korda, Miss Joan Gardner and Miss Wendy Barrie, who figured so delightfully as the débutante twins in "Wedding Rehearsal." Miss Gardner, however, made intelligent use of her material in "Men of To-morrow," and tackled a difficult part with skill. Miss Barrie's big chance is on the way. Undoubtedly, the initial efforts



"THE BLUE LIGHT," AT THE RIALTO: A WATERFALL AMONG THE DOLOMITES; ONE OF THE MANY MAGNIFICENT "SHOTS" OF MOUNTAIN SCENERY.

"The Blue Light" ("Das Blaue Licht") is a legend of the Dolomites. At each full moon a blue light shines on a high mountain peak. It terrifies the superstitious villagers of the Sarn Valley, for round this light is told the story of Yunta, a beautiful girl who comes down from the mountains to the village. They say she is a witch who entices men to their deaths in the mountains. One day the peasants chase her from the village, but one man, a visitor, follows, entranced by the girl's beauty. And thus comes romance to the lonely girl, a romance which ends in tragedy, as the two fall to their deaths—by the blue light.



THE MYSTERIOUS "BLUE LIGHT" APPEARS ON THE MOUNTAIN-SIDE AT FULL MOON: A LEGEND OF THE DOLOMITES WHICH HAS BEEN GIVEN A BEAUTIFUL CINEMATOGRAPHIC SETTING, AND MAY BE SEEN AT THE RIALTO.

them under control. Moreover, he faces the camera well, engaging the sympathy of his audience. He should and could become one of our most interesting screen-actors.

Mr. Robert Donat's share in "Men of To-morrow" secured for him a contract and the leading part in "That Night in London," due for public presenta-



LENI RIEFENSTAHL, WHO PLAYS THE PART OF THE MYSTERIOUS MOUNTAIN WITCH, YUNTA, IN "THE BLUE LIGHT"—A FILM DEVISED AND PRODUCED BY HERSELF: A STAR WHO APPEARED IN THE "WHITE HELL OF PITZ PALU," "STORM OVER MONT BLANC," AND "S.O.S. ICEBERG."

of both these young actresses are of sufficient quality to excite attention.

Since it has been left to Hollywood to exploit Mr. Charles Laughton as a kinema actor, his meteoric rise to stellar heights does not properly belong to this brief and necessarily incomplete survey of the kinematic firmament in England. But he is, after all, a British star, and one of such brilliance that his sudden arrival on the screen must be acclaimed. His dominating forcefulness, his uncompromising realism, and his ability to probe a twisted, tortured soul out through the artificial texture of "Devil and the Deep," and invested the *macabre* atmosphere of "Payment Deferred" with real tragedy. It has been said of him that he is inclined to force the frame of his pictures, yet in "The Old Dark House," his character-study of a hearty, though pathetically lonely, Lancashire magnate fell quietly into place in the team-work. It is rather his capacity for bringing an unusual character into full and quivering life, for revealing the mental impulse behind the action, that lifts him into startling prominence.

If our rising stars are to be firmly harnessed to our home-built chariots, they must be given work to do that will bring their individual gifts into full play. A star of world-wide fame may be a lodestone strong enough to bring in the public irrespective of the strength or weakness of the picture. But until such magnetism has been attained, the story no less than the direction must provide the dramatic opportunity that decides the future drawing-power of an embryo star. The present vogue of comedy with music is admittedly a fertile field; but it cannot be ploughed for ever, and inevitably, like every other vogue in screen entertainment, it will reach sterility. Serious drama, the "straight" story, is the ultimate test of talent. I am convinced that we have the actors—and not only amongst the newcomers, but that is another story—who, with the right parts in their hands, the right surroundings, the important support of a big picture, could make screen history. There is, fortunately, in the present "combined push," a justification to be found for such optimism.



# THE UNIVERSE OF LIGHT.

## II.—LIGHT AND THE EYE.

By SIR WILLIAM BRAGG, O.M., F.R.S., Fullerton Professor of Chemistry at the Royal Institution, and Director of the Davy-Faraday Research Laboratory.  
(See Illustrations on the opposite Page.)

In our issue of Nov. 5 we gave the first of a new series of six articles specially written for us by Sir William Bragg, the famous physicist, condensing certain of his delightful lectures to children at the Royal Institution. His subject—Light—bears on the Optical Exhibition to be opened today at the Science Museum, South Kensington. Sir William has expanded his lectures in a new book, "The Universe of Light" (not specially for young readers), to be published early next year by Messrs. Bell. Here follows the second article. Particulars of the rest are in the footnote opposite.

IN the first lecture we saw that light-waves spread outwards from a source—it might be the sun or a lamp—and were scattered and reflected by the various objects which they successively encountered. When they entered the eye they brought news of the source from which they

waves entering the eye by placing in their path a transparent lens. That part of the wave which goes through the centre is more retarded than those parts which go through the edge, because it has traversed a greater thickness of the transparent material. The lens of the eye is an organic structure which can be altered in shape by the action of muscles round its rim: in this way the amount of the converging action can be altered. If the lens functions correctly, the converging point falls on the retina, and vision is clear. In a normal eye, the lens muscles can so alter the shape and disposition of the lens that objects both near and far can be focussed at will. If they are not strong enough to effect a sufficient converging action, the eye will be unable to see objects clearly when they are close to. Then the eye must be assisted by a glass lens, which, being thicker in the middle than at the edges, helps the convergence. This is, of course, very often the case when eyes grow old. Near-sighted eyes can be made to see distant objects clearly by placing in front of them glasses which are thinner in the middle than at the edges.

The image of an object on the retina is upside down: and this troubles many people who do not see at once why we do not therefore see everything the wrong way up. There is a very simple demonstration of the fact by which everyone can convince himself of its truth. It was described by Silvanus Thompson in one of the Christmas lectures which he gave in 1896. It depends on the circumstance that if an object is held close to a lens, a shadow of it may be cast through the lens, which shadow will be right side up, as may be easily shown by trial with a lens from a pair of spectacles. Let now a hole be pricked through a card with a large-sized pin: the card is then to be held about an inch from the eye, so that a white cloud or some bright surface can be seen through the hole. The pin is to be held upright as in the figure, between the eye and the hole: sometimes a little patience is required before the right place is found. The pin is then seen upside down, as in the drawing on the opposite page. This inversion of the object is, of course, well known: it is exhibited, for example, in the photographic camera.

Those who think that we should therefore see things upside down are arguing from a vague idea that when the picture of an external object is formed on the retina, we, in some way, stand back and look at it. They miss the important point that, in the interpretation of the sensation of the vision, the business is taken up by the nerves and the brain: and these have learnt by experience, so to speak, that when the picture is one way up on the retina, it is the other way up in reality.

The whole business of vision is, indeed, an acquired art. The eye has done its duty when it has made its picture on the retina: the interpretation is yet to come. It is curious to consider what diverse means we use to get it right. Of course, the size of the picture on the retina, and the intensity of the sensation at different points on it, and the colours, are all primary contributions to the evidence that our brains have to sort out. These are not always enough.

When a ray of light meets a surface separating the medium in which it is travelling from another medium in which it will travel more slowly, some of the light will pass on from the one medium to the other. But when the speed in the second medium is greater than in the first, it may happen that none of the light will get through: it will all be turned back. This is illustrated on the opposite page.

Figure 1 in the text illustrates this point by showing how rays of light are bent or reflected when they meet the surface of a diamond. The velocity of light in a diamond is much less than in most transparent substances, so that the internal reflection effect is much in evidence. Rays moving within the diamond in the direction A, B, C, D, E all emerge into the open, though those marked A and E will only just do so and will skim the surface when they get out. The rays marked 1, 2, 3 cannot get out at all;

they are turned right back into the diamond. The effect is known as "total internal reflection." The brilliant sparkling of the diamond and other jewels is largely due to this cause, and the cutting of stones is carried out according to designs which are carefully calculated to make the best use of it.

The second figure in the text shows the way in which a diamond is cut so as to form a "brilliant." On the opposite page is a sketch showing in a general way how all the rays entering from the front are sent back again. Nothing gets through. The light is internally reflected at various faces and emerges in the end from one of the faces forming part of the front. This may happen in scores of ways, and so, when a diamond is held so as to face a fine beam of light from the arc, the screen is illuminated by as many flashes, which move in and out in an intricate pattern as the diamond is moved. It is this "return" of the original light which is the cause of the brilliance of the stone: wherever it is placed in the room, light is reflected from it in so many unexpected directions that it appears to be luminous. The velocity of light in the diamond is very slow as compared with other transparent substances, so that the internal reflection effect is in special evidence. Other jewels behave in the same way, though not, in general, so well. A sphenic is even more effective, but it is too soft to be a rival to the diamond.

A simple laboratory experiment illustrates internal reflection in a very pretty way. Water pours in an unbroken cascade from a tank into a sink below. A beam of light is shot across the tank, so as to enter the stream at its outlet. From that point it keeps within the stream, experiencing continual reflections at its surface. Finally, the light enters the water in the sink and illuminates it. We may often see the same effect on a smaller scale when we pour water from a jug into a basin; the light seems to be carried down by the water.

The "mirage" owes some of its curious effects to the same phenomenon of total internal reflection. When in hot, dry countries the temperature of the ground rises to a high degree, the layers of air next it may become, by contact with the ground, hotter than the layers above. Then a ray starting at a slight incline downwards may be totally reflected before it reaches the ground, because, in passing from layer to layer of increasing temperature, its speed continuously increases. In the end it will seem to an observer whose eye it enters to be coming out of the ground. If, at the same time, he sees the original by direct vision, he will believe that he is looking at an object and its reflection, and will naturally suppose that there is water to cause the reflection. The effect is heightened if some of the light from the sky is reflected in this way.

The reflection principle is made use of in the differentiation between natural and cultured pearls. The natural pearl consists of a series of concentric coats like those of an onion; if a ray of light is introduced between two of the coats it will travel round by reflection and can be detected at the other end of a diameter. A special instrument is used for the purpose; the method of its use will be understood from the illustration on the opposite page. Pearls must needs be bored to be treated in this way. If they are not, another method is available, based on the crystalline properties of the pearl material and on its response to X-rays.

One of the most remarkable properties of the eye is its sensitiveness, coupled with its power of adaptation to widely different intensities of light. We can bear to look at a candle six inches away, and observe that it shines brightly on a dark night at a distance of five hundred feet. The intensity at the shorter distance is a million times the intensity at the longer. When evening draws on and we find it difficult to read any more, it may well be that the intensity of our illumination is thousands of times less than it was when we began. It is possible to work with comfort at a position in a room where the light is only one five-hundredth of the light on the windowsill: and, curiously enough,

this is nearly true over quite a wide variation of the latter intensity, because the eye seems to adjust its sensitivity with respect to the light outside, requiring more when the day is bright and less when it is dull.

### INTERNAL REFLECTION IN A DIAMOND.

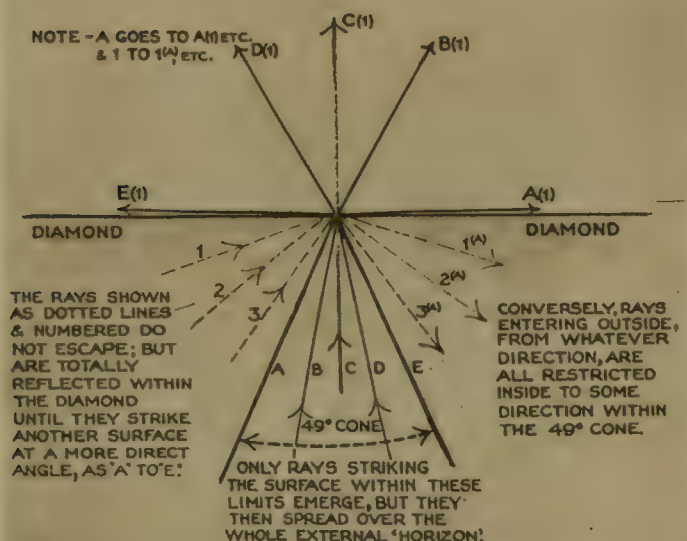


FIG. 1. THE PRINCIPAL CAUSE OF A DIAMOND'S BRILLIANT SPARKLING: RAYS OF LIGHT (MARKED 1, 2, 3) THAT CANNOT ESCAPE FROM IT AND ARE TURNED BACK INTO IT—AN EFFECT KNOWN AS TOTAL INTERNAL REFLECTION.

This diagram shows how rays of light are bent or reflected on meeting the surface of a diamond. Rays moving within it in the directions A, B, C, D, E all emerge, but A and E only just escape and skim the surface. Those marked 1, 2, 3 cannot get out, and are turned back into the diamond. This effect, called total internal reflection, is the principal cause of a diamond's brilliant sparkle.

had come and of their experiences on the way. In particular, they told us of their last encounter with material objects before they came to the eye and so enabled the owner of the eye to "see" those objects.

When such a confused medley of radiations coming from many directions enters the eye, it must be sorted out to become intelligible. At the back of the eye is the retina, a surface sensitive to light. If each of the sets of waves which entered the eye were spread over the whole of the retina the disentanglement would surely be difficult. There is a device, therefore, which gathers together the waves coming from each and every outside point and converges them upon a corresponding single point on the retina. Thus each detail of the view is impressed on the retina in its proper place, and the whole can be correctly interpreted by the brain.

In order to effect the sorting, advantage is taken of the fact that light travels through transparent media with velocities characteristic of the latter. If an advancing wave enters a medium in which it moves more slowly, and if it strikes the surface or line of separation obliquely, it tends to swing round, because one part of the wave is checked before the other. Just so, a part of men marching over a plain tends to swing round and change the direction of its march if it strikes obliquely a patch of ground where walking is more difficult. Perhaps the most familiar illustration is to be found on the seashore, where the waves as they roll in are parallel to the beach, whatever direction they may be following further out to sea. Their speed is checked as they come into the shallowing water.

It is not difficult to see now how we can take a set of advancing waves and make them converge upon a point. We have only to check them at the centre and let the wings run on. They will then take a crescent shape, and, as all parts of a wave move forward in a direction perpendicular to the wave itself, the motion will gradually pile up at a point. This is called the focus. The waves pass through this point and diverge from it in widening circles. The experiment is easily shown on the ripple-tank. A sheet of glass in the form of a lens is laid on the floor of the tank, so that the water above it is more shallow than elsewhere and the waves that travel over its surface move more slowly. The proper form of check is given to the



FIG. 2. THE METHOD OF CUTTING A DIAMOND SO AS TO CONSTITUTE A "BRILLIANT": A DIAGRAM SHOWING HOW FACETS BELOW THE "GIRDLE" ARE OPPOSITE TO THOSE ABOVE IT.



# THE UNIVERSE OF LIGHT: HUMAN EYES; DIAMONDS; TESTING PEARLS.

DRAWN BY G. H. DAVIS FROM MATERIAL SUPPLIED BY SIR WILLIAM BRAGG, O.M., F.R.S. (SEE HIS ARTICLE ON THE OPPOSITE PAGE.)

LIGHT TRAVELS MORE SLOWLY IN TRANSPARENT LIQUIDS THAN IN THE AIR, SO THAT WHEN THE LIGHT WAVES MEET THE LENS THEY ARE CHECKED.



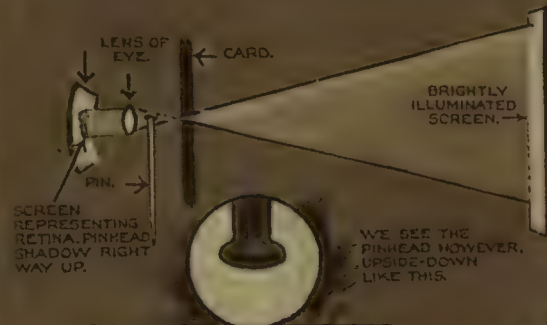
THUS THE VARIOUS SETS OF WAVES ARE FOCUSED ON TO DIFFERENT PARTS OF THE RETINA POINT FOR POINT. THIS ALTERATION OF DIRECTION IS KNOWN AS "REFRACTION".



EVERY OBJECT WE SEE IS FOCUSED ON THE RETINA UPSIDE-DOWN, BUT OUR BRAINS ARE ABLE TO REVERSE THIS & GIVE US A CORRECT PRESENTATION. TO PROVE THIS TAKE A CARD WITH A PIN-HOLE IN THE CENTRE, & HOLD A PIN-HEAD BETWEEN THE EYE & THE CARD AS ILLUSTRATED.

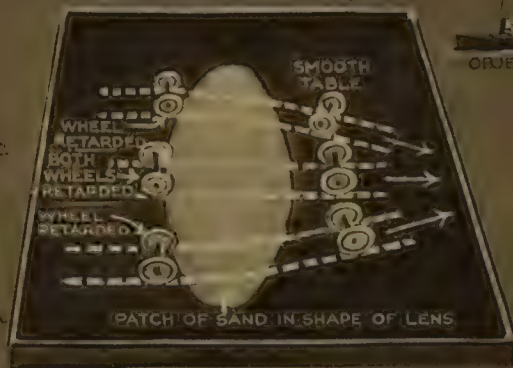


WITH SUCH AN ARRANGEMENT THE SHADOW ON THE BACK OF THE EYE IS RIGHT WAY UP, Owing TO THE RAYS NOT HAVING SPACE ENOUGH TO CONVERGE.

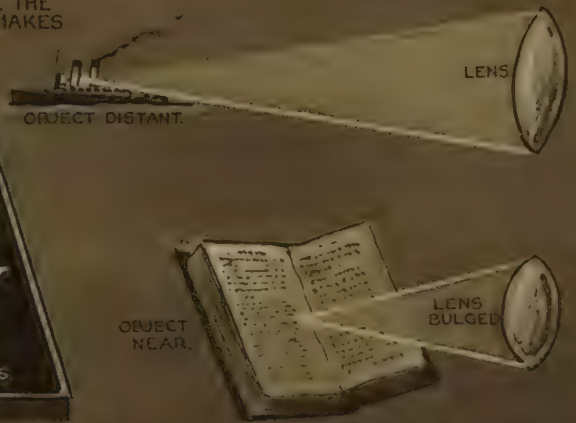


WE SEE THE PIN-HEAD HOWEVER, UPSIDE-DOWN LIKE THIS.

THE CONVERGING ACTION MAY BE ILLUSTRATED BY THIS EXPERIMENT WITH A PAIR OF WHEELS, RUNNING INDEPENDENTLY ON THE SAME AXLE, MADE TO ROLL TOWARDS A PATCH OF SAND. IF ONE WHEEL STRIKES THE SAND BEFORE THE OTHER, THE CONSEQUENT SLOWING-UP MAKES THE PAIR SWING ROUND.

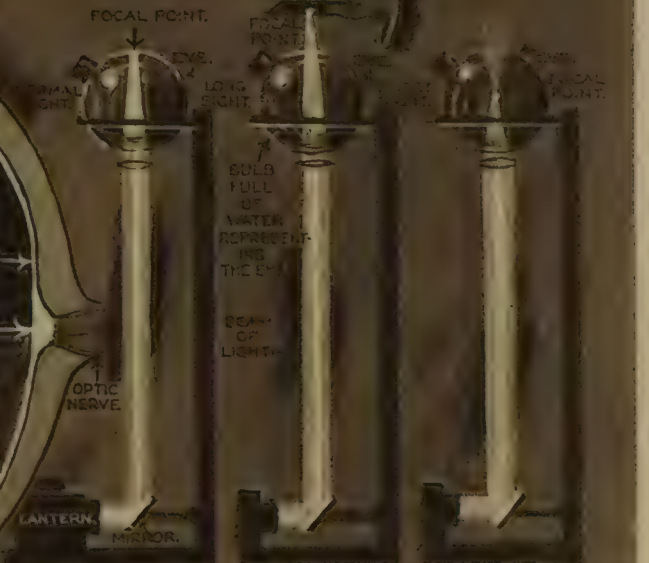
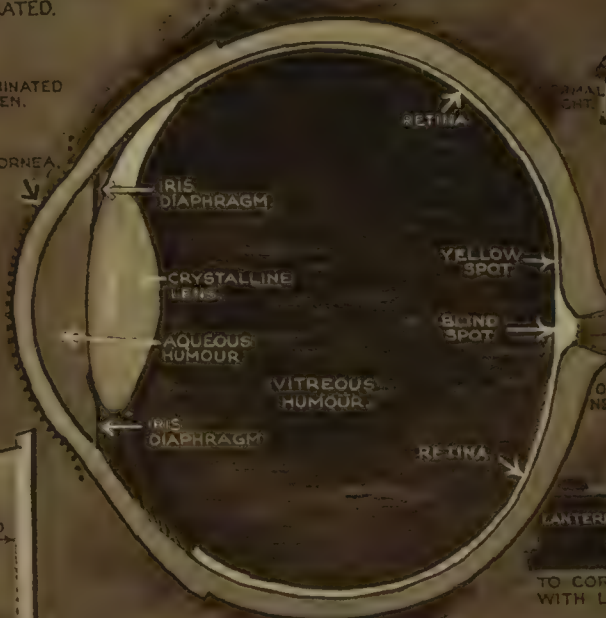


TO SEE AN OBJECT FAR AWAY THE LENS OF THE EYE DOES NOT BULGE SO MUCH AS WHEN THE OBJECT IS NEAR.



WHEN THE LENS MUSCLES DO NOT FUNCTION PROPERLY THE OBJECTS ARE NOT CLEARLY FOCUSED ON THE RETINA — AS THIS EXPERIMENT EXPLAINS.

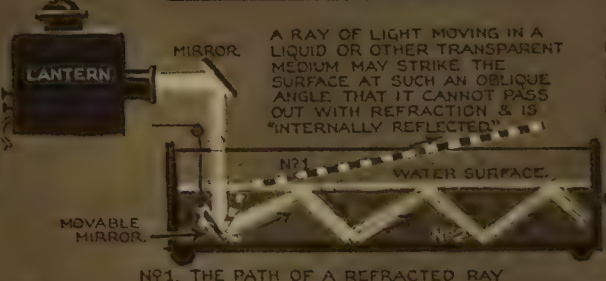
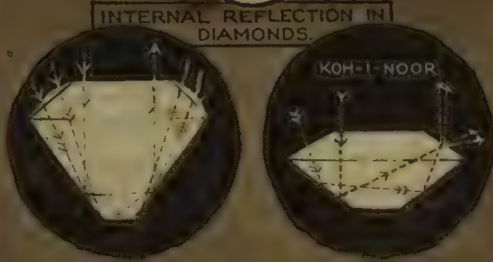
## SECTION OF THE HUMAN EYE.



TO CORRECT THIS NATURAL DEFECT WE PROVIDE SPECTACLES WITH LENSES BRINGING THE FOCAL POINT TO ITS NORMAL POSITION.

CONVEX LENS TO CORRECT LONG SIGHT. CONCAVE LENS TO CORRECT SHORT SIGHT.

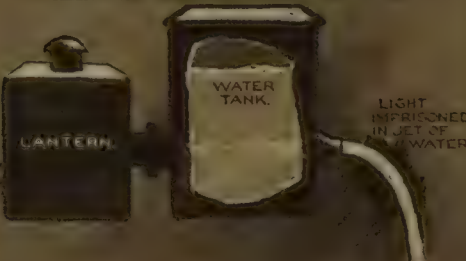
## SOME SIMPLE EXPERIMENTS ON TOTAL INTERNAL REFLECTION.



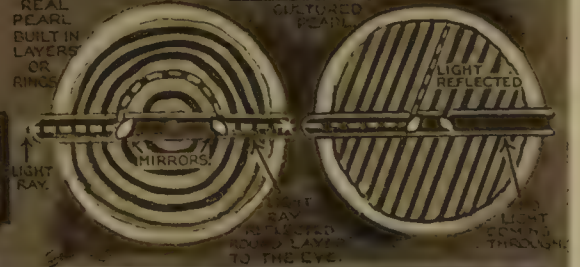
Nº1. THE PATH OF A REFRACTED RAY WHICH CAN JUST EMERGE AFTER REFRACTION AT THE SURFACE.

Nº2. ALTERED POSITION OF MIRROR CAUSES PATH OF RAY TO BE TOTALLY REFLECTED AT THE SURFACE.

## INTERNAL REFLECTION IN AN ILLUMINATED JET OF WATER.



## HOW REFLECTION IS USED TO TEST BORED PEARLS.



## THE ENDOSCOPE USED TO TEST BORED PEARLS.



## II.—"LIGHT AND THE EYE": SIR WILLIAM BRAGG'S EXPERIMENTS AT HIS SECOND LECTURE.

The above drawings illustrate the experiments described by Sir William Bragg in his article on the opposite page, which, as there noted, is condensed from the second of a series of lectures delivered by him at the Royal Institution on the subject of "The Universe of Light." His first article, on "the Nature of Light," based on the opening lecture, appeared in our number for November 5. The present one explains the mechanism of the eyes and their reaction to light. The explanation shows how, as Tennyson says, "That which made us . . . Set the sphere of all the boundless Heavens within the human eye."

Again, when Sir William Bragg remarks, with reference to the sensitiveness of the eye: "We can bear to look at a candle six inches away, and observe that it shines brightly on a dark night at a distance of five hundred feet," one recalls the words of Portia, walking at night in her garden at Belmont: "That light we see is burning in my hall. How far that little candle throws its beam!" The rest of Sir William Bragg's articles will appear in later issues. The next two (Nos. 3 and 4) will deal with "Light and Colour"; No. 5 with "Light from the Sky"; and No. 6 with "Light from the Sun and the Stars."





## A PAGE FOR COLLECTORS. THE GREATEST OF MEDALLISTS.

By FRANK DAVIS.

detect the virtues of a medallist almost as well as the eyes of the seeing.

The reverse of this medal, Malatesta in armour, with visor closed, standing between helm and shield, is less imaginative than the majority, but remarkable for the way in which this suit of armour has come to life: any number of artists could draw a picture of a suit of armour, but not so many could make that suit hold a living man. Here, as on all his medals, is the proud signature, "Opus Pisani Pictoris"—the work of Pisano the Painter.

A less brutal type of head is to be seen in Fig. 1—the portrait of Novello Malatesta, Lord of Cesena, the half-brother of Sigismondo. The reverse, showing Novello in armour kneeling at the feet of a crucifix, refers to a battlefield vow—a not uncommon incident in all periods—and is remarkable for the bold and successful foreshortening of the horse. With the remaining four medals, the artist gives more rein to his

so few people tell you the truth: were I a king, I should find it hard to resist the subtle flattery of the painter of genius who, beneath the legend, "Venator Intrepidus," showed me as a beautiful youth, dagger in hand, leaping naked upon the back of a wild boar, while my two dogs hang on to his ears. This is a magnificent rendering of violent movement on a small scale, and a fine composition into the bargain. I mentioned above that in his pictures Pisanello was careless about organisation of the space at his disposal: how beautifully everything is balanced in these medals, and yet with no rigidity, no dry formalism! And if you imagine it is easy to design in little and in relief, look at these six examples and then at a thousand others, both ancient and modern; I have no doubt as to your verdict.

Finally—Fig. 5—a woman's portrait, Cecilia Gonzaga, daughter of Gianfrancesco I. Many people find the women's portraits of the fifteenth century

I SUPPOSE that the majority of people who glance at this page require no introduction to two pictures in the National Gallery from the brush of Pisanello. One is of a St. Jerome and a St. George, the latter a most elegant and graceful young man in marvellous armour, with his head crowned by a monstrous great hat—a completely entrancing picture; the other is "The Vision of St. Eustace," in which the gorgeously apparelled saint reins back his horse at the vision of the crucifix between the horns of the stag he is hunting, while various animals are to be seen in a landscape. As a formal balanced composition, this has its faults—but who cares for the pedants? There it is, glowing like a jewel, full of incident, of miraculously observed movement, with every hair of the creatures' fur meticulously painted, one of the many small pictures in that great collection which amply repay a special visit made for no other purpose. No wonder his patron, Leonello d'Este wrote from Ferrara in 1432 that he was "distinguished among all painters of this age," and went on to mention "his excellent cunning." It so happens that not very long ago several studies of animals by Pisanello were illustrated in our pages, in which his accuracy and understanding were self-evident: these were from the rare sheets belonging to the Louvre. But there is another side to this superlatively good painter's genius which is perhaps not so familiar. He is universally acknowledged to be the finest medallist who ever lived. As a painter, his highly individual style places him in a class by himself: there is no one quite like him, but there have been greater painters before and since. As a medallist, he is head and shoulders above everyone, and, what is very remarkable, his faults as a painter—a tendency to crowd his panels with delightful but irrelevant detail—are in no way evident in his medals, which are examples of powerful portraiture and classic restraint second to none in the whole world. It is scarcely necessary to add that authentic specimens are of great rarity: there are a number of later copies, and a number, too, of medals he is known to have produced, but which, so far, have not come to light. I illustrate a few of the most remarkable from the British Museum collection.

I find it difficult to imagine a finer portrait in any medium than the medal of Fig. 6—that of Sigismondo Malatesta, Lord of Rimini. Admitted that the brutal, sensual, highly intelligent features of this princely young bandit gave the artist every help, this medal none the less remains a triumph of sensitive portraiture. I was going to exaggerate, and write that even a blind man could feel its force and insight, but of course that would be but the literal truth—the fingers of a blind man could no doubt



THE WORK OF PISANELLO, THE SUPREME MEDALLIST (1380-1456): PORTRAITS OF (1) NOVELLO MALATESTA, LORD OF CESENA; (2 AND 3) ALPHONSO V., KING OF ARAGON AND SICILY; (4) LEONELLO D'ESTE OF FERRARA; (5) CECILIA GONZAGA, DAUGHTER OF GIANFRANCESCO I.; AND (6) SIGISMONDO MALATESTA, LORD OF RIMINI.

Novello Malatesta, Lord of Cesena, whose portrait is seen on the first medal, was half-brother to Sigismondo Malatesta, whose profile appears on 6. The contrast between the mildness of the former's features and the brutality and sensuality of the latter's is very marked. The scene on the reverse of 1 has reference to a battlefield vow of Novello's. On the back of 6 is seen Sigismondo Malatesta in full armour, but none the less dynamic for that. The reverse of 2 has reference to the mediæval legend that the eagle left part of its kill to be devoured by other birds, and was thus the symbol of liberality; while that of 3 is a compliment to the king's courage. On the reverse of 4 is a lynx, blindfolded, sitting on a square cushion; for a statesman such as Leonello d'Este had to be able to guess when he could not see! On the reverse of 5 is depicted a curious variation of the unicorn legend.

imagination. The reverse of Fig. 4, the famous portrait of Leonello d'Este of Ferrara, shows a blindfolded lynx on a square cushion, a reference to the courage and cunning of the statesman, able to guess where he cannot see. In this, as in the other four, I invite all and sundry to admire how admirable is our painter's knowledge of animal anatomy, both bird and beast.

Figs. 2 and 3 are both portraits of Alphonso V., King of Aragon and Sicily. The reverse of Fig. 4 shows an eagle in the centre above a dead fawn, while other birds are gathered round—vultures, a hawk. The eagle was said to leave some of its prey for lesser creatures, and so was, in mediæval times, the symbol of liberality. The compliment is delicate—the skill with which it was conveyed beyond criticism. Even more charming is the compliment of Fig. 3. One of the penalties of royalty is that

in Italy difficult to admire, because of the unbecoming style of hairdressing, drawn right back from the forehead. Here there is a slight concession to a more flattering mode, for the hair comes forward a little beneath a ribbon. The reverse is an idyllic scene—a crescent moon, a rocky background, and a half-nude girl seated with her hand on an amiable beast, half-goat, half-unicorn. The girl presumably symbolises innocence, and the unicorn in mediæval legend could only be tamed by a virgin. I have more than once talked about the unicorn on this page, and have traced his story in China, India, Japan, and elsewhere. Here he is in fifteenth-century Italy, re-created from the dust of mediævalism and the half-understood tradition of the ancient world. Yet he is not quite the unicorn of the orthodox—he is half a he-goat, a beast justly credited with a knowledge of the world.



# THE VON AUSPITZ COLLECTION OF OLD MASTERS IN LONDON.

# SOME REPRESENTATIVE WORKS NOW ON SHOW IN BOND STREET.



"THE VIRGIN AND CHILD."—BY JOOS VAN CLEVE.  
(Early sixteenth century. Flemish School.)



"PORTRAIT OF A LADY."—BY LUCAS CRANACH.  
(1472-1553. German School.)



"THE VIRGIN AND CHILD."—BY BAREND VAN ORLEY.  
(C. 1485-1542. Flemish School.)



"ALOYSIUS GONZAGA."—BY EL GRECO.  
(C. 1545-50-1614. Spanish School.)



"THE RUINS OF THE CASTLE OF EGMONT."—BY JACOB RUISDAEL.  
(1625-1682. Dutch School.)



"A BLONDE WOMAN IN A WHITE DRESS."—BY JACOPO PALMA IL VECCHIO.  
(1480-1528. Venetian School.)

THOSE who regret the fact that there will not be an exhibition of Old Masters at Burlington House this winter may seek consolation in the fact that the world-famous Von Auspitz Collection is now in London, on view at Messrs. Thos. Agnew's by courtesy of Herr Walter Bachstitz. It comes, of course, from Vienna, and it will remain here this month and during December. The thirty-three works to be seen certainly confirm the opinion of many that the von Auspitz is the finest, most varied, collection of Old Masters which has been formed in recent years. It may be added that "A Blonde Woman in a White Dress," by Jacopo Palma il Vecchio, came from the collection of the Archduke Leopold Wilhelm, Governor of the Netherlands. In the catalogue is the note: "This portrait appears in a picture, painted by Teniers, representing a room containing the Archduke's collection." It is a canvas measuring 39 by 35 inches. The van Cleve is a panel measuring 24½ by 18½; the Cranach is a panel, 24½ by 15½; the van Orley is a panel, 14 by 9½; the El Greco, a canvas 29 by 23½; the Ruisdael, a canvas 49½ by 38; the Memling, a panel, 10 by 7.



"PORTRAIT OF AN OLD LADY."—BY HANS MEMLING.  
(1430-1494. Flemish School.)



# TRIBAL LIFE.

BEING AN APPRECIATION OF

"THE TRIBES OF THE ASHANTI HINTERLAND": By CAPTAIN R. S. RATTRAY.\*

(PUBLISHED BY THE CLARENDON PRESS, OXFORD.)

THESE two volumes add substantially to the heavy debt under which Captain Rattray has placed all anthropologists by his studies among African tribes. Hitherto his work has lain chiefly in Ashanti itself: he now takes us to the Northern Territories of the Gold Coast, among tribes who previously have received insufficient attention, and who comprise about half-a-million souls in an area of some thirty thousand square miles. The



A CLAY MODEL OF A CHAMELEON FASHIONED ON THE SIDE OF A GRAIN-STORE TO PROTECT IT: A CURIOUS CUSTOM OF THE NANKANSE TRIBE.

Among the Nankanse a chameleon is the most powerful of all guardian spirits. Any ancestress may become a chameleon, and the spirit itself is in the iron (bangle, hoe, etc.) which is placed in the clay model of the chameleon. The bas-relief shown in the photograph is one of the things that a woman's spirit may use as a shrine after her death.

Reproductions by Courtesy of the Clarendon Press, Oxford, Publishers of "The Tribes of the Ashanti Hinterland."

volumes now published represent two years of investigation, and contain an extraordinary amount and variety of information, systematically arranged and lucidly set forth. A considerable part of the first volume is devoted to the comparative philology of the tribes which Captain Rattray surveyed, and this contribution alone (supplemented as it is by general observations from the expert pen of Professor D. Westermann) should prove invaluable to future students. Every relevant aspect of tribal life is separately examined and documented, and the anthropologist is provided with an abounding storehouse of all his favourite preoccupations. The work has not only a learned value—though that is high—but a practical purpose which provides an interesting sidelight on the responsibilities of the White Man's Burden. Only by a scientific, indefatigable inquiry of this kind, illuminated by a great deal of expert knowledge already acquired, can the white governor obtain a true understanding of the nature of his task. "Gentlemen in England now abed," who are sometimes ready to express ill-formed views on imperial problems, may learn from a work of this kind how much patient, arduous, and sympathetic labour goes into the complex task of native administration.

\* "The Tribes of the Ashanti Hinterland." By Captain R. S. Rattray, C.B.E., D.Sc. (Oxon), of the Gold Coast Political Service. With a Chapter by Professor D. Westermann. Two Volumes. (Oxford: Clarendon Press; 45s. net.)

Anthropologists have sometimes exposed themselves to the reproach that they accept too credulously, and build too many facile inferences upon, evidence which is second-hand and often even more indirect than that. Captain Rattray's evidence has the cogency of the first-hand and the unadulterated; and a particularly interesting feature of the first volume is "a series of pen pictures of Native life in a Nankanse village," written by a tribesman who in youth was rescued from slavery and educated by missionaries. It covers a great many aspects of life and custom in the writer's own tribe, which in most important respects is characteristic of the group surveyed. In translation from the native dialect, it produces an effect of naïve picturesqueness which is of great fascination. One specimen, describing the etiquette of a proposal of marriage, may suffice to illustrate the style—and perhaps may show that courtship in the jungle has its politenesses no less than courtship in the drawing-room. The suitor thus declares himself: "The ancients have measured (i.e., pondered over certain matters) and declared that it is necessary to tickle a dumb person in order to know the words which are in his inside. If I remain silent and say to myself that you would never agree to love me, would that not be foolish? It is on account of this, that I sit with you thus, that we may know each other's thoughts, that I may know if you consent or do not consent." The reply is charmingly guarded—non-committally committal, in the best tradition. "Perhaps the girl will answer and say, 'Does one person refuse to converse with another? I never expected that you would agree to open your mouth and say that you love me. Did you expect that I would open mine and say that I don't love you? Such things cannot be. Come, let us talk, and if our converse becomes good, and the spirits unite and agree to give us, we will be united.'"



MEMBERS OF A PASTORAL AND WIDELY DISTRIBUTED RACE: FULANI GIRLS.

If this coming-on disposition is absent, the uncertainty of parental consent is used as a polite form of denial.

One of the most interesting aspects of Captain Rattray's researches is the evidence which he adduces for the existence of two distinct race-strata in this part of Africa. "The majority of the tribes who inhabit the Northern Territories were, I am convinced, residents in or near the localities where we now find them, centuries before the ancestors of those whose names many of the divisions now bear

had arrived in that part of Africa. Upon these more or less autochthonous peoples, with their very primitive institutions, descended small bands of strangers within comparatively recent historical times. . . . These strangers superimposed upon the primitive tribes, among whom they settled, a new and unheard-of political conception, namely, the idea of territorial and secular leadership in place of the immemorial institution of a ruler, who was the high priest of a totemic clan and dealt only in spiritual sanctions." The two kinds of chieftainship still exist side by side, though, under the influence of the white interloper, the tendency has been increasingly for the power of the Priest-King, or *Ten'dana* (who is also the titular overlord of the tribal land), to shrink before that of the *de facto* temporal



THE 270 HUT OF THE LATE *TEN'DANA* (PRIEST-KING) OF GAMBAGA; SHOWING THE PARTLY-CLOSED EXIT WHICH IS FOR SPIRITS ONLY, AND IS CALLED "BAD DOORWAY."

This form of hut is intimately connected with the funeral customs of Ashanti tribes. Among the Dagomba the wall between it and the adjoining hut is knocked down to permit the corpse to be carried out. Before the partly-closed doorway could be opened, the author's informant had to sacrifice a goat and a fowl and call all the spirits. After that he would only leave it open on Mondays, Thursdays, and Fridays.

ruler: a circumstance which Captain Rattray deprecates as injurious to true tribal identity and cohesion. The blending of the two racial strains is even more strikingly shown in the peculiar institutions of kinship which exist among the Nankanse. On a main "classificatory" basis, the prevailing system is patrilineal. But this was in all probability an importation, for alongside the clan or agnatic relationship, there exists for every individual a system of blood- or cognatic relationship (known as the *Sòò*) which is traced through the mother. This duality is very familiar in primitive law, and the classic example of its development is to be found in Roman society. As is well known, it has led to much controversy as to whether human society originated in a patrilineal or a matrilineal group, and opinion in recent years has more and more tended to the view that neither one nor the other form can be positively assumed to have been the earlier in all circumstances. Nevertheless, there is much evidence for the great antiquity of matriarchy, and these African tribes seem to add to it.

Since much attention has already been concentrated on the customs of the younger, invading tribes, Captain Rattray has devoted the greater part of his investigations to the aborigines, whose traditions and institutions, he believes, were not greatly disturbed by the immigrants. The general scheme of tribal organisation is totemic, patrilineal, and exogamous, and contains all the extremely complicated avoidances which are usual in groupings of this kind. In particular, the student of anthropology will find here rich material for the ever-mysterious and ever-fascinating study of totemism. Among the many valuable examples of folk-lore which are quoted, none are more interesting than the aetiological myths by which every clan "explains" its totem. "An investigation," writes Captain Rattray, "of the various current traditions accounting for the origin of totemism among these tribes results in disclosing a uniform basis to all these legends. An ancestor had been befriended—or in some cases injured—by something, an animal, reptile, bird, inanimate object, or ill luck or misfortune had followed on the commission of some supposed offence in word or deed. The ancestor had, in consequence, decided it was necessary for his future well-being to associate himself with that particular event, the outstanding feature in which became the concrete symbol of this association." The interesting feature of the taboos and avoidances which result from the totemic system is that they have by no means disappeared from society. Avoidances form

(Continued on page 826.)



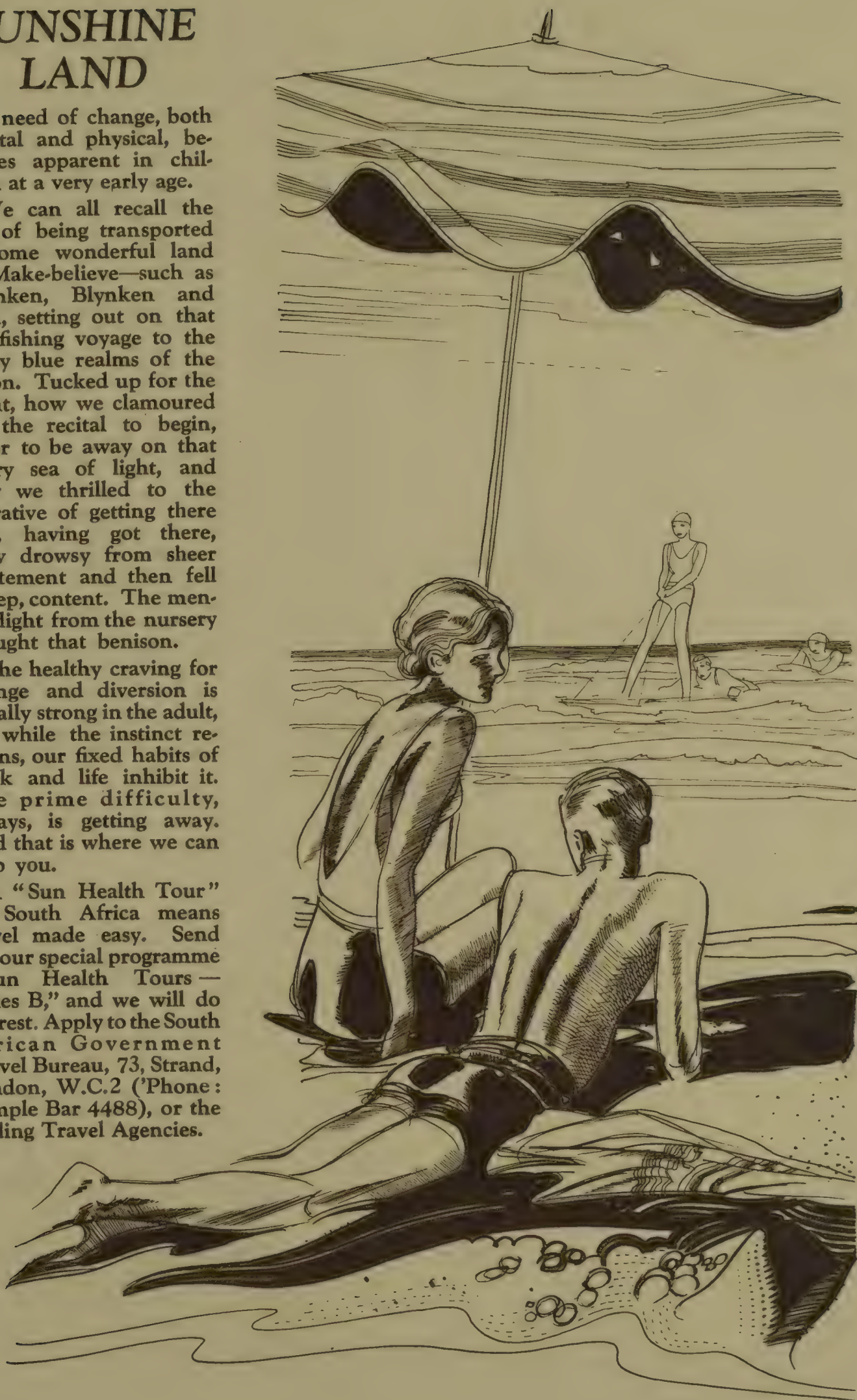
## SUNSHINE LAND

The need of change, both mental and physical, becomes apparent in children at a very early age.

We can all recall the joy of being transported to some wonderful land of Make-believe—such as Wynken, Blynken and Nod, setting out on that star-fishing voyage to the misty blue realms of the moon. Tucked up for the night, how we clamoured for the recital to begin, eager to be away on that starry sea of light, and how we thrilled to the narrative of getting there and, having got there, grew drowsy from sheer excitement and then fell asleep, content. The mental flight from the nursery brought that benison.

The healthy craving for change and diversion is equally strong in the adult, but while the instinct remains, our fixed habits of work and life inhibit it. The prime difficulty, always, is getting away. And that is where we can help you.

A "Sun Health Tour" to South Africa means travel made easy. Send for our special programme "Sun Health Tours—Series B," and we will do the rest. Apply to the South African Government Travel Bureau, 73, Strand, London, W.C.2 ('Phone: Temple Bar 4488), or the leading Travel Agencies.







BY APPOINTMENT



## THE "HENLEY" TABLE CABINET IN POLISHED WALNUT

FITTED WITH "HENLEY" PATTERN HAND  
FORGED STERLING SILVER SPOONS & FORKS  
AND IVORY HANDLED RUSTLESS STEEL  
CUTLERY TO MATCH

18 Table Forks	1 Chutney Spoon,
6 Table Spoons	6 Egg Spoons
12 Soup Spoons	1 pair Sugar Tongs
12 Dessert Forks	1 Pickle Fork
12 Dessert Spoons	18 Table Knives
12 Tea Spoons	12 Cheese Knives
12 Coffee Spoons	1 pair Meat Carvers
2 Sauce Ladles	1 pair Game Carvers
1 Soup Ladle	1 Steel
1 Sugar Sifter	<b>£110</b>

Canteens fitted with sterling silver spoons and forks, etc.,  
in stock from £21. Please write for catalogue.

**The  
GOLDSMITHS &  
SILVERSMITHS  
COMPANY · LTD**

*Jewellers and Silversmiths to H.M. the King*

**112 REGENT STREET, LONDON, W.1**

*(Corner of Glasshouse Street) No other address*

## ARE THERE SUCH THINGS AS WARRIOR PEOPLES IN EUROPE?

(Continued from Page 792.)

assure his own party, the nobility and the dynasty, a permanent superiority over that opposition—and he made three wars in order to do it. It is obvious that the men who are governing Germany to-day hope to reconstruct that state of affairs. Germany would not break entirely with the West and the free countries; she would not, right in the twentieth century, make the futuristic experiment of absolutism in the service of social revolution.

Whatever the drawbacks of that resurrection of Bismarck for Germany and Europe, I consider it preferable to Hitler's reactionary revolutionism and Bismarckian caricature. A few weeks ago, in Paris, I asked the wife of a prominent figure in the Socialist Party which she preferred, Hitler or von Papen. She replied without hesitation that she preferred von Papen, and gave me her reason for it, a reason which may appear strange and incomprehensible to an Englishman or Frenchman, but which I, an Italian, could follow perfectly: "With von Papen and his clan, we know just how far they are likely to go, and we shall always be able to talk things over with them. With the National-Socialists in power, no communication would be possible. For instance, I myself do not know a single one of them."

There is, however, one great difficulty: are those genuine disciples of Bismarck, now governing Germany, going to be able to govern with an opposition? To succeed in governing with an opposition—it is not superfluous to repeat it—that Government has to be strong. Bismarck and his successors were able to govern for a century and a half with an opposition because they were the masters of the State and country. To-day, even if his pupils did manage to re-establish the monarchy, their power would always be weak and precarious. They have behind them no longer brilliant successes, but a gigantic catastrophe, a world-wide disaster. They are no longer surrounded by a monarchical Europe of which the Hohenzollerns could be the heads and protectors. They can no longer count on the alliance of prosperity.

It will be much more difficult for Bismarck's true disciples than it was for the master himself to assure their party a lasting superiority over the opposition or oppositions. They will always be too many and too strong, if permitted liberty of action. But if the disciples of Bismarck allow themselves to be so far carried away by their weakness as to do away with that opposition, there will be no difference between their arrival in power and that of National-Socialism; for Europe, the danger would still be the same.

Every day events bear out more and more those who have been maintaining, ever since 1919, that the liberties of Europe are the only solid foundation on which peace and the internal order of States could be reconstituted—the liberties of Europe; that is to say, representative régimes in the form either of a democratic republic or a constitutional monarchy as in England. France, England, and the United States have not realised it: and the world is in chaos. It is essential to recall this primary truth, because, no matter what is done to prevent it, so long as Europe has not recovered her liberties, that disorder will increase. The problem presents itself to-day as it did in 1919, only its solution has become more difficult. But that solution is the same to-day as it was in 1919, because there is but one. On the day that the directing bodies of the free countries come to realise that truth, the world will begin to recover from the fever of violence and anarchy that is now shaking it with intermittent convulsions.

It is often repeated that the German Republic and German parliamentarism are dead. Are those who broadcast these funeral announcements quite sure of what they say? History is as full of apparent existences as of apparent deaths: political genius consists in not being taken in by them. In 1808 everyone took the Napoleonic Empire for an immortal giant. Two men had the idea that it was a walking corpse: Talleyrand and Metternich. Who were right? It is just possible that the contrary illusion deceives those who are watching the disturbances in Germany to-day.

Let us try to see to the bottom of events. In Germany, at the present time, there is a Government that represents the pure Bismarckian tradition. That Government, and the Prussian Marshal who is at the head of the Reich, might be reproached with excessive leanings towards the Republic and parliamentarism. They have before them an enormous and tumultuous surge of new generations, a half-reactionary, half-revolutionary breaker that would like to sweep away Republic, Parliament, and liberal institutions. And yet it is the Junkers, the disciples of Bismarck, and the old Prussian Marshal who are hesitating, trying to stem that movement, and making untold efforts to calm, circumvent, and reduce it to more reasonable proportions.

What does that mean? That that Government, just because it clings to an old political tradition, knows full well that, even if the younger generations could easily make a clean sweep of all liberal institutions, it would, on the other hand, be a terrific responsibility to destroy them, to do away with the right of opposition, and take Germany right back into the eighteenth century, under pretext of causing her to make a miraculous stride towards the future. To primary teachers, small journalists, shopkeepers and industrialists struggling with debts, young students who think they know everything because they have so far learnt nothing, for all the bourgeois small fry that, in every country, go to make up the force of those parties of revolutionary reaction, such an upheaval might seem quite natural and of no especial importance. An old Prussian Marshal knows that it might have apocalyptic consequences both for Germany and the world.

But this striking contrast should restore courage to those from whom it is ebbing away. It is a strange, almost unbelievable fact that the liberties of Europe are now finding their last defender in an eighty-five-year-old Prussian Marshal. Nevertheless, it happens to be true: the old Marshal defends the liberties of Europe against Hitler in his own way: but he does defend them. Whether he will succeed in saving them is another matter; but the fact that he is trying to save them, by setting up the tradition of Bismarck against National-Socialism is the decisive proof that those liberties are not the philosophical caprice of a small élite, nor an aberration of the history of the nineteenth century, but a vital necessity to the modern world.

Moreover, a very simple reflection is sufficient to prove it. Since the end of the war it has been the fashion to demand from the leaders strong Governments, authoritative methods, dictatorships. History has once more been distorted, in order to justify that incessant recourse to force as being the salvation of the world. There are many young people, and even elderly men, who think by this to reveal a new rule of wisdom to a straying generation. But they are merely crying out for the oldest thing in the world. There have always been leaders, everywhere and since the beginning of time. The Kaffirs and Zulus had leaders, before the conquest of Europe; the man-eating blacks of Central Africa, still more or less independent, have their chiefs. And so history is full of authoritative, dictatorial Governments who have tried to free themselves from all control. And, in order to render it more fierce and intractable, it has even been known for power to be divinised.

What really is a novelty—for in Continental Europe it only dates from the nineteenth century, and in England from the eighteenth—is a Government pledging itself to use its force with justice and wisdom, not in its own interest, but for the public good; a Government which, in order to be more certain of resisting the treacherous temptations of power, grants the people the right of opposition and guarantees it by a system of political liberties. It is that tremendous novelty, last and splendid fruit of Christianity, that formed the incomparable greatness of the nineteenth century, and the decisive superiority, in spite of so many other imperfections, of the West itself over the peoples of more ancient civilisation. Is it possible that Europe could become oblivious to that resplendent truth and lose itself in darkness? I do not think so. It is the truth that is destined to illumine the world.





*"Me and me pals, we collects cars—just for a bit o' fun. I'm Standard and doin' well. Had a real haul to-day, I did. Had to go down to the docks and if I didn't see a line o' Standard cars that beat the band! Bein' shipped, they were, over to foreign parts. Little Twelves and Big Twelves. (How do I know? Sees it written on the back, o' course!) Comin' back I collected another thirty-nine of 'em—I bet my score's a winner again. They're everywhere they are—them Standard cars!"*

THESE are the cars he means — The new "Little Twelve" six-cylinder Saloon £189; The new "Big Twelve" six-cylinder Saloon £215. (Self-change pre-selective gear models with direction indicator from £240); The 1933 "Little Nine" four-cylinder Saloon £159; The 1933 "Big Nine" four-cylinder Saloon £205. (Self-change pre-selective gear models with direction indicator from £230); The 1933 "Sixteen" six-cylinder Saloon £235; The 1933 "Twenty" six-cylinder Saloon £325. Dunlop Tyres. All prices ex works. Investigate the 1933 Standards in your own armchair. Write "Catalogue" on a postcard and send it, with your name and address to:— The Standard Motor Co. Ltd., Canley, Coventry. West End Showrooms: The Car Mart Ltd., 46-50 Park Lane, London, W.1 and 297-9 Euston Road, London, N.W.1

*Read "The Standard Car Review," published monthly, subscription 3/6 a year, post free.*

**KNOWS THE 1933 STANDARDS!**



## THE WORLD OF MUSIC.

### A REAL VIRTUOSO.

THE appearance of Horowitz at the Royal Philharmonic Society's concert attracted a larger audience to the Queen's Hall than usual for the Philharmonic concerts. Nevertheless, the house was by no means full, and this is because the public has not yet awakened to the fact that in Horowitz we have a true virtuoso pianist in the best sense. The remarkable qualities of this young Polish pianist were made clear at the first recital I heard him give at the Queen's Hall, which took place last season as one of the Courtauld-Sargent concerts. This week he played the Tchaikowsky Pianoforte Concerto, with Sir Thomas Beecham conducting, and the performance was one of the most remarkable, if not the most remarkable, I have ever heard for its combination of musical sensibility, power, and brilliance. I do not know whether Horowitz will ever achieve the profundity and the imaginative power of Schnabel, but he has got, like the other and greater pianist, the real and not the sham sort of virtuosity, together with an exciting quality that reminds one of Paderewski. Paderewski, though never to be classed on the highest level, had at his best an amazing and electrifying brilliance. It is in this respect that I see some likeness—with a great deal of unlikeness—between Paderewski and Horowitz.

The Tchaikowsky Pianoforte Concerto is a very peculiar work, peculiar in that, although it is generally considered to be an extremely effective work, one which a virtuoso can make very exciting to semi-musical people, it is really, in my opinion, rather an ungrateful work both to play and to hear. The pianist who can thrill any but the extremely naive with a performance of this work achieves a truly extraordinary feat, because it is only effective in bits, and these passages have to be handled with quite exceptional skill, for they are so obvious. It was here that Horowitz was completely triumphant, for he managed to avoid banality without deserting the composer.

Personally I thought Sir Thomas Beecham needed to have given more of the exact attention Horowitz

gave to the music, because in the first movement one had always the feeling that it was the pianist who was doing all the work; but things improved, and in the last movement the collaboration was more equal. The other items in an attractive programme were Berlioz's bizarre "King Lear" Overture, Debussy's "Iberia" Suite, and Mendelssohn's "Scotch" Symphony.

### ANOTHER PIANIST.

Miss Myra Hess, who is a great favourite with the musical public in this country, played the Beethoven G major Pianoforte Concerto at the B.B.C. Symphony Concert at the Queen's Hall under Sir Henry Wood. The last time I heard Miss Myra Hess play this work I thought her performance a poorish one. On this occasion, however, there was a great improvement, and I think this improvement was simply due to the fact that Miss Hess made more demands upon herself on this occasion. Perhaps the presence of virtuosos such as Schnabel and Horowitz in London is stimulating to our native pianists! It ought to be so, because there is nothing like a revelation of what can be done to shake us out of our complacency in our own performances. If we did not have examples from time to time from those who can extend boundaries, we should remain shut up within our own limitations, thinking them to be insurmountable or else no limitations at all.

### BACH AND STRAUSS.

The rest of the programme consisted of Bach's Brandenburg Concerto No. 6 in B flat, which the violas played standing, and Strauss's "Heldenleben." The playing of the Bach on this occasion was above the average, due to the fact that there was less of this schoolmasterish over-accentuation of the time-stresses that has become such a bane. An excellent performance of the Strauss tone-poem followed. It is impossible not to admire the dexterity and certainty of Strauss's craftsmanship. Everything "comes off" superbly, and although it is, in essence, rather commonplace, descriptive music, it is done with such ease and brilliance that one cannot help enjoying it.

W. J. TURNER.

## TRIBAL LIFE.

(Continued from Page 822.)

a large part of the beliefs of many sincere persons in our own day, their modern version being the remarkable variety of "antis" which cranks and fanatics contrive to accumulate.

Religion is spiritistic, not idolatrous: among all the tribes we meet old friends in the Sky-god and his wife, the Earth-goddess. The individual's life is predestined by the Sky-god. Ancestor-worship has the place which it usually occupies in the agnatic clan; and a large, if not tyrannical, part in public and private life is played by the soothsayer. He is a busy and an influential man; for nothing in the primitive life is more exacting than the unlucky wight's constant and "pitiful endeavour to discover why one or the other of the hundred and one disappointments or worries which assail all of us in this work-a-day world, should have malignantly fallen his way." The rites de passage at birth, puberty, and death are very carefully observed and fully described; they do not, unless we are mistaken, present any very novel features, but they form an interesting body of evidence as to these very important elements of tribal observance. With regard to "political" organisation, the hierarchy of social authority rises from the foundation of the Undivided Household, with its Family head, or *Yi-dana*, through the Section-groupings, to the spiritual and temporal chieftains—the Priest-King, or *Ten'dana*, and the Territorial Ruler, or *Na*. Among the "newcomer" tribes, the Mampruse, Dagomba and Moshi—many of whom are tinged with Mahomedanism—the social constitution is more elaborate than this and cannot here be described in the detail which it deserves. If we felt disposed to be captious, we should permit ourselves a little grumble that Captain Rattray has made no separate heading of the administration of criminal law—though we fully recognise that "criminal law" is merely an artificial term of convenience in this connection, since it is not distinguished in practice from ordinary tribal custom. There are interesting incidental references to penalties for murder, adultery, and theft, but somewhat fuller information would have been valuable. The description of the ordeal deserves study by anybody who is interested in the many baffling aspects of mediæval ordeals.

We leave this book not only with admiration for its patience and discernment, but with a feeling which all anthropology inspires—namely, that however complicated and anxious the "artificial" life of civilisation may be, it is not quite so complicated and anxious as the "natural" life of the wilderness!

C. K. A.

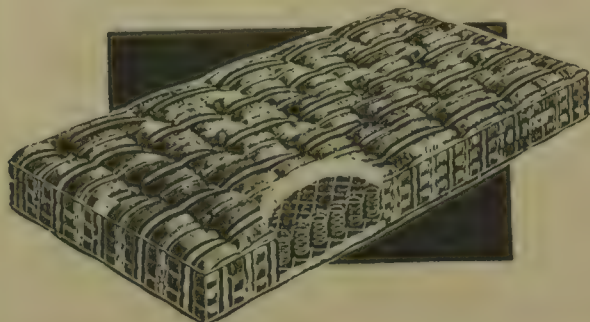
# Bedding that will give you luxurious rest

The 'Vi-Spring-Vibase' Combination—the World's most luxurious bed equipment.



## The 'Vito' Overlay Mattress

Those requiring a lower-priced overlay mattress than the 'Vi-Spring' should see the 'Vito,' a really comfortable spring-interior overlay mattress, thoroughly reliable in service yet extremely moderate in price. Its spring centre, placed between two generous layers of soft upholstery, consists of hundreds of small springs, not in pockets. The unique shape and assemblage of these springs ensure for the 'Vito' a strength and resiliency that make it pre-eminent for lasting comfort and hard service. Ask your House Furnisher to show you the Vito-Vibase Combination.



## The 'Vi-Spring' Overlay Mattress

For over 30 years the 'Vi-Spring,' the original pocketed spring overlay mattress, has stood in a class by itself, unequalled for luxurious comfort and durability. Hand-made throughout, it imparts a wonderful softness and resiliency that can never be equalled by the machine-made mattress. The 'Vi-Spring' used in conjunction with the 'Vibase' Mattress Support makes it unquestionably the world's greatest combination for perfect sleep.

## The 'VIBASE' MATTRESS SUPPORT

The 'Vibase' is the most efficient support for the 'Vi-Spring.' It provides a base which allows the springs in the overlay mattress to give their fullest resiliency; it also eliminates the possibility of sagging. Fully upholstered in tickings to correspond with the 'Vi-Spring,' it is equal in appearance and durability to the costly box springs, yet sells at practically the same price as the best un-upholstered supports.

Sold by all reliable House Furnishers. Write for Illustrated Catalogue, sent post free on request to:

**Vi-Spring Products Ltd.**

98, Vi-Spring Works, Victoria Road, Willesden Junction, London, N.W. 10.





# Gieves

By Appointment. By Appointment.

21, OLD BOND STREET, LONDON, W.1

**OUTFITTERS.**

and at  
PORTSMOUTH  
GIBRALTAR  
EDINBURGH  
WEYMOOTH  
LIVERPOOL

**TAILORS**

and at  
SOUTHAMPTON  
PLYMOUTH  
SOUTHSEA  
CHATHAM  
MALTA



It is a matter of satisfaction to know that if one shops at Gieves, value and individual attention are assured. A choice collection of requisites for Evening Wear await your selection.



## Good News for Good Golfers

66  
King  
Plus  
99

NOW

2½

is now minus 6<sup>p</sup>

The famous King Plus has won such a host of loyal supporters that it is now possible to reduce the price from 2/6 to 2/- each. The quality is exactly the same in every respect.

Good Golfers who thought the old price just a little beyond their reach now have a choice from the world's best for 2/- — Silver King in all markings and King Plus.

**BOX OF  
TWELVE, 24/-**

Prices are now uniform in British Isles and Irish Free State.  
Obtainable from all Professionals and Sports Dealers.

**THE SILVERTOWN COMPANY, ALDWYCH HOUSE, LONDON, W.C.2.**



## BREATHE your cold away . . . . with VAPEX

Always have Vapex in your home. Be ready for the first slight symptoms of an oncoming cold — the warmth of the palms, the "rustiness" of the throat, the hot head, the "below par" feeling. Used at that early stage Vapex acts like magic, gently stimulating the respiratory system to increased resistance. Your cold will soon be a thing of the past.

Of Chemists 2/- & 3/-



## C. Brandauer & Co.'s Ltd.

### CIRCULAR POINTED PENS.

**SEVEN PRIZE  
MEDALS**



These series of Pens neither scratch nor spurt. They glide over the roughest paper with the ease of a soft lead pencil. Assorted Sample Boxes, 9d., to be obtained from all Stationers. If out of stock, send 10d. in stamps direct to the Works, Birmingham.

London Warehouse: 124, NEWGATE STREET, E.C.



## A GREAT DISCOVERY OF PREHISTORIC ART.

(Continued from Page 798.)

If I rank the abundance and variety of prehistoric art in South Africa above that of Fezzan, the position changes regarding relative importance if we enquire into motives. In South Africa, the styles show a baffling vagueness of outline, and motives have degenerated into playful obscurity. Thus I reach the second point in which the Fezzan monuments can claim primary importance among all prehistoric and early historic pictorial arts hitherto discovered: *critical artistic examination leads to the conclusion that the Fezzan galleries contain work which, both in technique and motives, clearly shows a relation to all prehistoric and early historical pictorial art manifestations of the races of Euro-Africa.* (Here follows a description—transferred to page 799—of the parallels there illustrated.) Not only is it possible in this way (*i.e.*, by the comparisons on page 799) to bring essential features of content of all prehistoric and early historical art in the Old World into orderly relation to the facts of the chronological and stylistically determinable Fezzan records, but the latter's scientific importance is straightway evident. The Fezzan pictorial art of the Italian colony of Libya occupies a central position both in space and time.

But we cannot do justice to these works by viewing them merely from the scientific standpoint. How can even the best drawings (I disregard the spiritual poverty of dead photographs) reproduce the outstanding impression which these monuments produce in their gigantic magnificence beneath the open sky? I should like to suppose, however, that our illustrations convey some reflection of the imposing inwardness of these elephants, rhinoceroses, images of gods, and so on. Many of these, however, deserve particular regard as works of art on a small scale. The head of a ram (see page 801)—the expression of



APPOINTED ARMY MINISTER IN KASHMIR, AN INDIAN STATE MUCH IN THE LIMELIGHT OF LATE: MAJOR-GENERAL NAWAB KHUSRUNG.

suffering of the animal being brought into the circle of victims—or a herdsman with a donkey's mask, for example, would do credit to any art or cultural period. To what psychological refinement the art of Fezzan attained is proved by the humorous aspect of the two animal-headed gods shown on the same page.

Such pieces as these animal-headed gods are not extraordinarily old; they belong, perhaps, to the second or third millennia B.C. Unmistakable parallels with phases of Egyptian art prove this point. About that time a high culture must have prevailed in Fezzan. This fact is also established by finds accompanying the rock pictures, consisting of stone implements which are very closely related to those of early Egypt. The technique must have been highly developed, and must also have flourished in clay carving and clay plastics. All earth- and clay-work, however, in Fezzan, as throughout the hinterland of modern Tripoli, has fallen a victim to the climate and disappeared, so that all that remains to recall them is the effect of clay-work on the technique of stone. The whole of living culture, in fact, has disappeared from the country and migrated to the Sudan.

There in the Sudan, between Senegal and Lake Chad, still germinate seeds which matured in ancient times on the fertile northern fruit lands where flourished the culture of the Garamantes. The clay structural work and clay reliefs, rice-growing, worship of animal constellations, epic poems, and so on, of the old Garama-Fezzan, still survive to-day in the French Sudan and British Northern Nigeria, in which regions I studied them from 1907 to 1911. There in the south, up till 1909, I was able to trace the tradition of sacrificial ceremonies on the foundation of a holy city of the Garamantes and to find the ruins of such a city, but now in Fezzan, at Scharaba, near the rock pictures, temples of nature are to be found in the primitive home of the Garamantes. I use the word "primitive," for it is now proved that this culture grew out of a period contemporaneous with our post-glacial epoch.

### A CHARITABLE CHRISTMAS MARKET.

As we had occasion to note in our last issue, next week will offer the generous a peculiarly excellent chance to combine charity with present-buying, particularly for Christmas. To be precise, a Christmas Market in aid of that fine institution, the Elizabeth Garrett Anderson Hospital, will be held at the Dorchester Hotel, Park Lane, on Nov. 22 and 23. This will be opened on the first day by the Marchioness of Carisbrooke. Its patronesses include Lady Patricia Ramsay, the Marchioness of Dufferin and Ava, the Countess of Oxford and Asquith, the Duchess of Rutland, Violet Duchess of Rutland, the Duchess of Westminster, and Lady Diana Cooper; while among the prominent stall-holders are the Countess of Lytton,



A WELL-KNOWN CANADIAN WHO IS VISITING LONDON: MR. J. M. GIBBON, THE AUTHOR; AND GENERAL PUBLICITY AGENT OF THE CANADIAN PACIFIC RAILWAY.

Mr. Gibbon was at one time editor of the famous English journal "Black and White." He was one of the founders of the Canadian Authors' Association, and has written many novels, establishing himself in the front rank of Canadian writers. He is also a Fellow of the Royal Society of Canada. He was educated at Aberdeen and at Christ Church, Oxford, where he took a first in "Greats."

Lady Plender, Lady Robertson, Mrs. William Graham, Mrs. Verney Harcourt, Lady Maugham, Lady Brunner, the Hon. Mrs. Gilmour, and Lady Ashfield. There will be an Anything and Everything stall, presided over by Mrs. William Graham; a Dolls and Toys stall; a Christmas Presents stall; and stalls for baskets, bulbs and plants, china and glass, crackers, flowers and fruit, jewellery, needlework, poultry and game, toilet soaps, creams, perfumes, powders and other requisites, travellers' needs, and wax flowers; and a United Dairies stall. In addition, there will be exhibition dancing.

*Quality Tells*

NEW YEAR, they say, for good resolutions. But here's one for Xmas—give him Vat 69 and make him your friend for life!

Obtainable everywhere in Xmas cardboard boxes containing 1 or 2 bottles, and in strong wooden cases containing 3 and 6 bottles.

**VAT 69**  
LIQUEUR SCOTCH WHISKY

W.M. SANDERSON & SON, LTD., DISTILLERS,  
LEITH, SCOTLAND. Established 1863.





**A SIMPLE PRESENTATION OF  
SOME VERY CHARMING AND  
DELIGHTFUL CHRISTMAS GIFTS**

No. 1. MOROCCO DRESSING CASE; fittings in English enamel and silver gilt. Lined moire silk, obtainable in several colours - - - - - 20 Gns.

Models for Gentlemen from - 15 Gns.

No. 2. PIGSKIN UTILITY CASE, ideal for toilet articles, lined oil silk, with large sponge pocket. Size 11 x 7 - 35/-

No. 3. PIGSKIN BOX CASE, lined leather, chromium plated fittings, natural ebony brushes, guaranteed pure bristle - - - - - 70/-

No. 4. HANDBAG in finest quality polished calf, secure and attractive slide frame. Lined silk, fitted with large mirror powder case and divided inner pocket. In brown, black, navy, red and green - - - - - 25/6

No. 5. HANDBAG in superior quality morocco, lined silk, fitted large mirror and divided, inner pockets. In black, navy, nigger, havana, green and red - - - - - 10/6

No. 6. HANDBAG in willow calf, complete with detachable chromium plated wrist watch. Lined silk, fitted large mirror and divided inner pocket.

In navy, black, brown, beige, red and green - - - - - 21/-

No. 7. 30-HOUR TRAVELLING ALARM CLOCK, in morocco case, luminous dial, reliable movement - - - 37/6

No. 8. TRAVELLING BAG in waterproof canvas, lined linen, with two large pockets, strong leather handles and piping. Ideal for those last minute articles. In brown, navy, green.

12" 19/6 14" 22/6 16" 25/6

*to be seen at the*

**REVELATION**  
*Suitcase Company Limited*

170 PICCADILLY, LONDON, S.W.1 (Facing Bond Street)

—where you can also see a whole host of intriguing gadgets, leather and otherwise—that no one can resist.



**YOUR CISTERN  
IN THE ROOF**

supplied by BAILEY'S 'CALIBAN' RAM. Worked by falls of water as low as 3 feet given by running brooks. No running costs or attention.

SIR W. H. BAILEY & Co., Ltd.  
Salford, Manchester.

**THE LONDON ELECTROTYPE  
AGENCY, Ltd.**

Publishers, Authors, Illustrated Press Agents, &c., should apply to the above Agency in all matters dealing with arrangements for reproducing Illustrations, Photographs, &c. Sole Agents for 'The Illustrated London News,' 'The Sketch,' &c.

10, ST. BRIDE'S AVENUE, E.C.4

**CHIROPODY  
and PEDICURE**

QUALIFIED practitioner for Chiropody, each foot 3/6. Foot Massage for strengthening weak ankles, correcting bunions, etc., from 5/- Immediate attendance or appointment. Advice free.

PHYLLIS EARLE SALONS  
32 DOVER STREET, PICCADILLY, W.1. Regent 7541 (8 lines)

**MENTONE—Gd. Hotel du Louvre**

Fine Family Hotel. Next Public Gardens and Casino. Full South. Large Grounds. Tennis. Garage. Terms very moderate.

When in Canada  
*Smoke a FRESH cigarette*

**British Consols**

MILD, SWEET, OLD VIRGINIA

"Made FRESH — Kept FRESH"

SEALED IN MOISTUREPROOF CELLOPHANE

MACDONALD'S CIGARETTES & TOBACCOS, MONTREAL, CANADA

**S  
C  
H  
O  
O  
L**

**OF  
DANCE MIME  
DARTINGTON HALL**

Dance Technique  
Body Development  
Dalcroze Eurythmics  
Dramatic Improvisation  
Mask & Costume Making  
Puppets & Stagecraft  
Drawing Art Music

APPLY SECRETARY TOTNES  
DARTINGTON HALL DEVON



# THE CHRONICLE OF THE CAR.

By H. THORNTON RUTTER.

**F**REAK driving has never been encouraged by the Competition Committee of the Royal Automobile Club, so I am not surprised to learn that in the Club's Rally to Hastings (instead of Torquay) in March next year the slow-driving test will be a minimum speed of 5 miles an hour on top gear, with no bonus marks if a slower speed is attained over the timed distance. Last year, at Torquay, the slowest car on top gear gained the most marks, and was a great advantage to cars fitted with fluid fly-wheels; in fact, they won all the chief prizes in this 1000-miles' tour. This so astonished some motor manufacturers that to-day one sees a number of different makes of motor-cars fitted with "slipping" clutches, and carrying changing-gear devices to make them capable of regular freakish slow running on top gear.

For this second year of the R.A.C. Rally the Club have decided upon Hastings as the rallying point, with the competitors starting, as they did this year, from London, Leamington, Bath, Norwich, Buxton, Harrogate, Liverpool, Newcastle-on-Tyne, and Glasgow. Not more than one hundred competitors will be permitted to start from any one control, so I

To provide further tests of skill in driving, competitors will have to drive the car over a measured distance of about 100 to 200 yards at a minimum speed of 5 miles an hour on top gear without slipping the clutch with their foot; take part in an acceleration test and a braking test over a distance of 200 yards, and a restart on a hill. In the acceleration test from a standing start, the cars will accelerate to the half-way line, across which they must stop and then accelerate again to the finish, the time being taken for the whole distance. In the re-start test, the cars will be required to get away from a standing start on a gradient of approximately 1 in 6. Marks will be divided if the car fails to cover the first ten yards in 5 seconds; and also if the car runs back more than four inches, or if the remainder of the hill is not climbed without a stop. These are the new rules, differing from those of the previous Rally. The only other alteration is the compulsory second driver, and the value of the bonus marks for extra passengers has been considerably revised. The time limit of one hour after a competitor's schedule has been fixed in order to qualify for the R.A.C.'s plaque, awarded to all who complete the road section at the average speed laid down for their class less than one hour late.

## Cars for the Continent.

Continental countries are following the example set by England to raise extra money from their motorists. The result is beneficial to our British motor industry, as we and we only build smaller, lighter, and more economical-running cars than any other country. Only this week I ran into Mr. Dudley Noble, who had just returned from Holland after making arrangements for a display by Messrs. Rootes, Ltd., of British cars at the Amsterdam Motor Show to be held early in January. He told me that the Dutch motorist "is now groaning under almost as heavy a load of taxation as his English brother, for, besides a road tax based upon the weight of his car, he is also mulcted in a species of property tax—the higher the

value of his car the more he must pay. The actual horse-power does not enter into the matter." So that while in the past Continental motorists have bought big cars in Holland of high horse-power,



ONE OF THE NEW HUMBERS IN HOLLAND: A SCENE IN THE PICTURESQUE FISHING VILLAGE OF VOLENDAM.

motor traders that the best British light cars will sell in gratifying numbers when the Continental public see them displayed at Amsterdam, Brussels, and similar exhibitions. Mr. Noble also informed me that he had been pleased to note that even fairly high-priced cars, such as the Humber "Snipe," had favourably impressed Continental car purchasers, and several orders for that model have been taken by agents for English cars in Holland. Leading motor manufacturers also report that there are clear indications in Switzerland, Spain, Norway, Sweden, and Denmark that English cars are creating a demand there at their present prices, and for the economy of cost in running, light cars being especially favoured by women drivers.

## Compression Ignition.

The publication of the official approval of the Rolls-Royce "Condor" compression-ignition aero engine by the Air Ministry marks a further step in the progress which the heavy oil-using compression-ignition engine has made during the past year in Great Britain. Besides the prospects of cheaper flying for commercial aviation which this report suggests, we can look forward to seeing a development for private car use in due time. Already, as the Scottish Motor Show revealed to its visitors, the compression-ignition engine is now a "real motor" (as I overheard one critic remark) for goods and public service vehicles. This should help to reduce costs in commercial transport, as well as add dividends to the oil producers. Fire risks are supposed to be lessened in machines fitted with motors using heavy oil as fuel in place of petrol. Therefore, with all the efforts which are being made to add

to the safety of our roads, one cannot deny that even a partial elimination of the fire risk will be helpful in encouraging further progress and use of compression-ignition engines.

Mr. A. F. Sidgreaves, the managing director of Rolls-Royce, Ltd., broadcast to the Midland Regional Station listeners on Nov. 1 on "the war on noise in quest of the perfect motor." As every motorist knows, that "war" continued in the experimental shops of this great organisation over a period of many years, but they won by producing eventually the quietest running motor-car yet built. Then the firm turned to aero engines, and, with the experience gained from their "war on noise," the designers produced the Rolls-Royce engines which carried

Sir John Alcock and Sir Arthur Whitten Brown across the Atlantic in the first successful flight made in the summer of 1919. Last year Rolls-Royce engined aeroplanes won the Schneider Trophy with a speed of 340 m.p.h., and later Flight-Lieut. Stainforth captured the world's speed record at 407 miles

(Continued overleaf.)



THE AUSTIN LIGHT TWELVE-FOUR, WITH ITS SLIDING ROOF: A VIEW OVER DERWENTWATER FROM ASHNESS BRIDGE; SKIDDAW IN THE BACKGROUND.

advise would-be entrants to apply at once for an entry form from the Secretary of the R.A.C., Pall Mall, London, S.W.1, or any of the R.A.C. branch offices, in order to be sure they can start from the place which suits them best.

This Rally is held a fortnight later next year, as the cars will start on March 14 and finish on March 18, with the Coachwork Competition for comfort, style, and equipment on the last day. Only cars which have completed the 1000-miles road section of the Rally will be eligible to compete for the coachwork prizes, for which an extra ten shillings entrance fee is charged to the three guineas entrance fee for the Rally to the public, and reduced to two guineas to members and associate members of the R.A.C. These low entry fees should make this Rally even more popular than this year's successful gathering.

## Tests of Driving.

The Rally is also to encourage better driving and speed without risks of accidents. Thus no one

driver is to be allowed to pilot a car over the whole distance of 1000 miles unrelieved from the wheel, as happened in the previous Rally. The regulations insist on there being two drivers to every car, one of whom shall drive at least 300 miles of the road section, so that limits the maximum distance of any one driver to about 700 miles. Consequently, I do not expect to see any of the women drivers fall asleep at the wheel and run into trees or hedgerows in this Rally, as they did last time, due to driving continuously day and night without a rest. Cars competing in the Rally will be divided into three classes, namely, up to 10 h.p., between 10 h.p. and 16 h.p., and over 16 h.p. The average speeds for the respective classes are 22 miles per hour, 24 m.p.h., and 26 m.p.h. for the entire distance, including all time lost for rest, refilling, and refreshment.

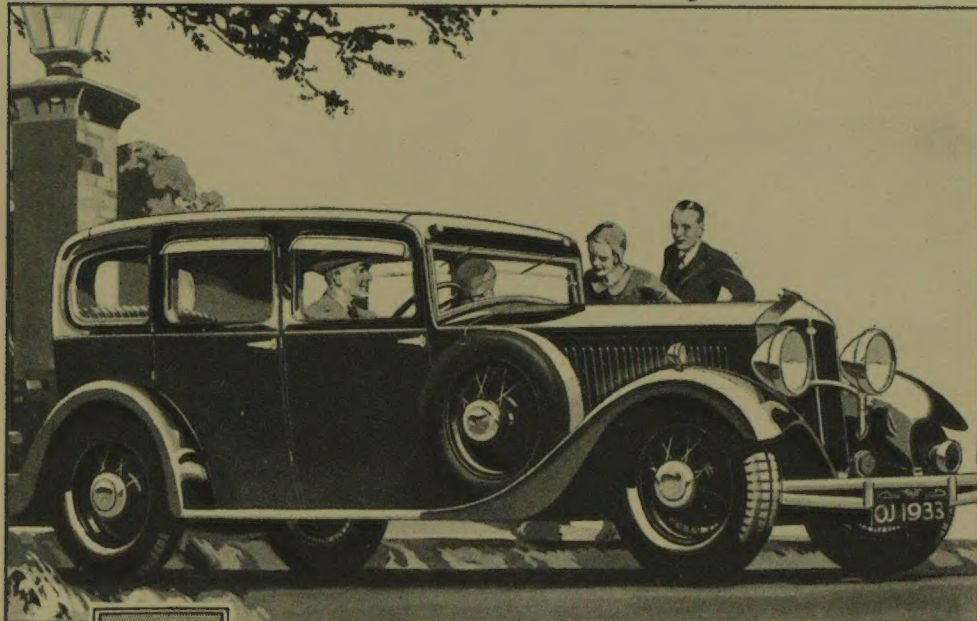


WITH HER NEW LANCHESTER "TEN": MRS. EDWYN RANKIN.

with large six- or seven-seater coachwork, to-day they are favouring economical-running four-seaters of light weight, such as the 10-h.p. Hillman Minx, as they have much less to pay on these cars in regard to taxes, yet have all the "big car" appearance. It is the opinion of the leading Dutch



# Built regardless of cost and yet ITS PRICE IS ONLY £395



- A four-door five-seater saloon, with perfectly finished coachwork.
- 21/60 h.p. 6-cylinder engine giving power, flexibility and smoothness.
- Centricast cylinder liners and centre-seal pistons, for long life, efficiency, and economy.
- Free wheel transmission, giving the easiest possible gear change.
- Four-speed gearbox with silent third gear.
- Lockheed hydraulic brakes, giving perfect braking efficiency.
- Sealed bulkhead for driver and passenger comfort effectively prevents noise, heat and fumes entering the body.

+ + +

Every luxury the connoisseur demands is present in this car, because it is built entirely regardless of price. It speaks well for the resources of England's finest motor factory, and Wolseley experience in building six-cylinder cars, that motor-ing so luxurious and so comfortable can be enjoyed so reason-ably. Triplex glass throughout.



## WOLSELEY

21/60 H.P. SIX CYLINDER

### County de Luxe

WOLSELEY MOTORS (1927) LTD., WARD END, BIRMINGHAM.

Governing Director: Sir W. R. MORRIS, Bt.

**LIBERTY'S**  
HAVE A  
**WONDERFUL**  
COLLECTION OF  
**GIFTS**  
AT  
**MODERATE**  
**PRICES**

COLOURED  
CATALOGUE  
SENT  
POST FREE

LIBERTY & CO. LTD. REGENT ST. LONDON, W.1

**DO YOU KNOW A REAL PEARL WHEN YOU SEE ONE?**  
For an Ideal Gift, see MAXIM PEARLS GREAT £100 ADVERTISING OFFER. To prove the superiority of MAXIM PEARLS over all others we will send you on receipt of P.O. for 7/6 post free, the famous MAXIM PEARL ROPE 60 ins. long, usual price 2 gns; can be worn as 1, 2 or 3 row necklet. Not more than two sent to one address. MAXIM PEARLS deceive even experts. They are the finest reproductions existing. We will give £100 to any charitable institute if this statement can be refuted. **Maxim Pearl Specialists. Dept. I.L.N., Norwich Union Buildings, 39, St. James's St., London, S.W.1**

"Listen to the Whispers  
of Little Lady Liqueur"



**The Occasion**  
--Interval at the Theatre provides a most suitable opportunity for GRANT'S MORELLA Cherry Brandy.

**The Whisper**—"Thank you for proposing a little GRANT'S MORELLA Cherry Brandy. May I ask everyone to do as you do—ask for GRANT'S MORELLA by name—and so make sure of the Cherry Brandy with a century's reputation for wonderful quality!"

Welcome Always—  
Keep it Handy

**GRANT'S MORELLA  
CHERRY BRANDY**

also try GRANT'S Invictament CRÈME de MENTHE which is equally delicious ..... ask your wine merchant for it too.....

THOS. GRANT & SONS  
MAIDSTONE, KENT.  
(Established 1774.)

QUEEN'S SWEET  
SPORTSMAN'S DRY

Shetland Industries Ltd



92 GEORGE ST BAKER ST LONDON, W.1.  
TEL—WELBECK 8654.

For Christmas  
give  
Shetland Woollyes



*Continued.*

per hour in a similar machine. The new "Condor" compression-ignition engine has now passed the standard civil test of 50 hours' running. It develops 500 h.p., and, with starter and accessories, weighs 1504 lb. or practically about 3 lb. per h.p. Its twelve cylinders are set out vee-wise in two banks of six, water-cooled, and with a compression ratio of  $12\frac{1}{2}$  to 1, or about double that of the petrol-using motor.

#### Automatic Selection.

Motorists will not be surprised to learn that many further developments are in hand with regard to automatic selection of the correct gear-ratio to suit the load placed on the engine of any car. Mr. J. Robertson, some four years ago, allowed me to drive his Austin "Seven," in which the engine automatically chose the gear-ratio (of the gear-box) best suited to the road and amount of throttle-opening. The latter, of course, was in the hands of the driver, to put his foot more or less down on the accelerator-pedal. Now Mr. Vincent Bendix, famous for the Bendix starter and automatic clutch-withdrawal actuation, has further developed his ideas on automatic gear-changing according to the speed of the car by the opening and closing of the throttle. The Paris correspondent of the *Motor* has tested a twelve-cylinder Packard, I believe, fitted with this American engineer's automatic engine-governed gear-changing device. He stated that, when starting in low or bottom gear, this ratio has to be engaged by the operation of the hand lever, as in any other car. But after getting the car "under way," the road speed of the car is controlled solely by the use of the accelerator-pedal, and no manual gear-changing is necessary. "Whenever occasion arises, changes of gear, up or down, take place of themselves, and at the right moment for optimum performance," he writes in his account of his run in the car. This is exactly the same performance that the Robertson gear effected, which was originally designed for our War Office for "tanks." I shall welcome Mr. Bendix's car to London when it arrives here, as it will be particularly interesting to see how, and why, the automatic gear-changing works.

## THE PLAYHOUSES.

### "SPRINGTIME FOR HENRY," AT THE APOLLO.

THIS is a flippantly amusing comedy, perfectly acted, with the characters such purely theatrical figures that its complete lack of morals will only shock the very unsophisticated. Henry is a professional philanderer, who boasts that he is so successful with women that his married men friends enviously regard him as a cad. Such a man obviously would not hesitate to make love to a friend's wife. Henry does, indeed, make love to Mrs. Jelliwell, though in justice to him it must be said that her husband has no objection, for were they not at the same school together! Indeed, in one scene, reminiscent of Bernard Shaw's "How He Lied to Her Husband," he bitterly upbraids Henry for ceasing to pay attentions to his wife, holding that this is a slur on his taste as a husband. Henry is temporarily a reformed character through the arrival of a lady typist of high principles. It is true that she has recently shot her own husband, but this was in France, where such marital infelicities are but lightly regarded. Thanks to this Miss Smith (she has resumed her maiden name after her triumphant acquittal), Henry abandons cocktails and lovemaking—except with Miss Smith herself. But his character is unable to stand the strain, and in the end he returns to the arms of Mrs. Jelliwell, leaving his old school-friend to elope with Miss Smith. A light and delightful after-dinner entertainment for those playgoers who do not take the drama seriously. It is finely acted by Mr. Ronald Squire, the perfect philanderer; Miss Isabel Jeans, as the undutiful wife; and particularly by Mr. Nigel Bruce, whose picture of bovine inarticulateness is one of the most amusing performances in town.

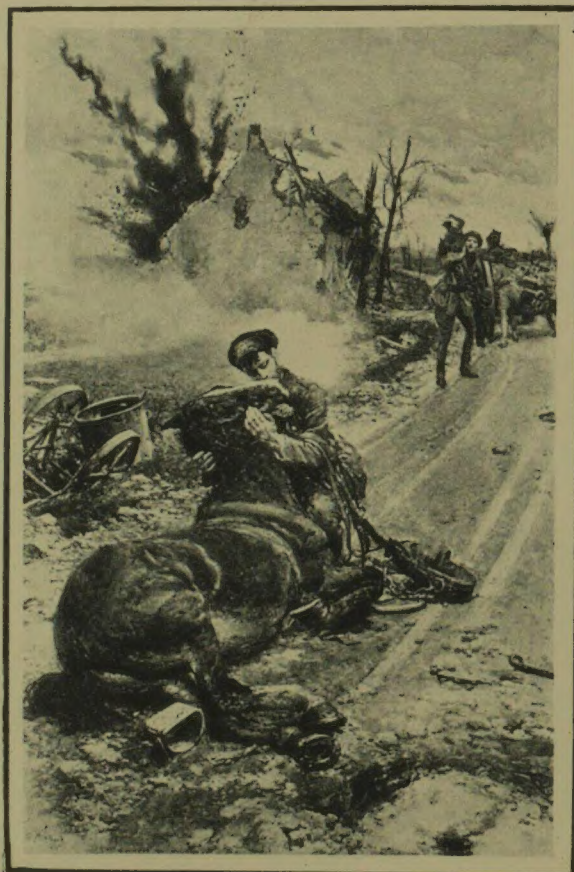
### "TO-NIGHT OR NEVER," AT THE DUKE OF YORK'S.

This is a facile, easy piece of play-carpentry that passes the evening very pleasantly. Technically this play, which also deals with a prima donna, is a better one than "Evensong," yet it is not nearly as satisfying. With all its faults, "Evensong" does provide a great part in which Miss Edith Evans can display her superb art. "To-Night or Never" is a much more trivial affair altogether. The prima donna is accused by her singing-master of having no heart, and

consequently her performance in "La Tosca" suffers. Until she has loved, he declares, she will never be a supreme artist. As it happens, the lady is already half in love with a stranger who has thrown a bunch of violets in at her open window, and that evening she goes to his hotel room, on the pretext of mistaking the floor. Here she finds him sharing a suite of apartments with an elderly lady, so that she assumes him to be a gigolo. Yet she is unable to withstand his lovemaking, and spends the night with him—with the consequence that she makes the success of her career at the next day's matinée performance of "La Tosca." The young man turns out to be a famous American impresario, touring the Continent with his aunt in search of stars. Miss Peggy Wood, though frequently inaudible, acts very charmingly and sings delightfully as the prima donna. Mr. Basil Rathbone gives a polished performance as her lover, and two clever character-sketches are contributed by Miss Eva Moore and Mr. Kenneth Kent.

### "FOLLOW ME," AT THE WESTMINSTER.

Mr. Tyrone Guthrie has treated the subject of this play, the Second Advent of the Messiah, reverently, but not very dramatically. The second coming so closely resembles the first in details that it is a moot point whether the author has not merely set out to give us a modernised version of the Old Testament. We see Matthew, a worthy Scots joiner, announcing to his dismayed family the impending visit of an Unknown, accompanied by a group of disciples, most of them fishermen. The wife refuses to welcome them, whereupon we see, through a half-open door, Matthew ushering his guests into the front room of his flat. Here they shock the family by singing rollicking choruses, the which they attempt to drown with a hymn. In the second act, three years later, we hear of the trial of the leader for inciting disturbances among the people; of his refusal to plead, and finally of the sentence of death passed upon him. In the third act, Matthew's son and daughter, finding their father's religious activities prejudicial to their prospects, are on the eve of emigrating to the United States. Matthew himself is about to set out on a revivalist campaign, accompanied by his faithful but unconverted wife. The play was competently acted, and the effect was undoubtedly impressive, though the theme requires finer handling than the author has been able to give it.



"GOOD-BYE, OLD MAN"

An incident on the road to a battery position in Southern Flanders.

By F. MATANIA, R.I., the famous artist.

## FORTUNINO MATANIA'S

### Famous Picture

## "GOOD-BYE, OLD MAN"

In response to many requests a reprint of this striking picture has now been made in photogravure. Size of picture,  $11\frac{1}{2}$  ins. by  $17\frac{1}{4}$  ins., on plate sunk mount  $15\frac{1}{2}$  ins. by 22 ins.

Copies are now to be obtained, price 5/- each.  
Copies signed by the artist, price 10/6 each.  
Postage 6d. extra.

Orders with remittance to be sent to:—

Dept. E, ILLUSTRATED NEWSPAPERS LTD.,  
346, STRAND, LONDON, W.C.2

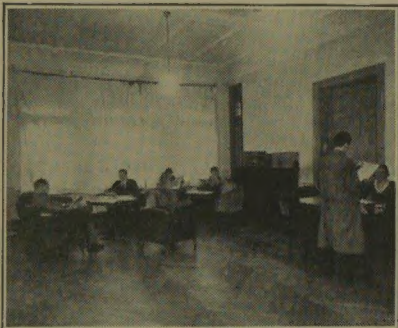


Let  
**ILLUSTRATED NEWSPAPERS**  
Help You When You  
Go to Paris & Berlin

At the Paris Offices of "THE ILLUSTRATED LONDON NEWS," "THE SPHERE," "THE SKETCH," "THE TATLER," "THE BYSTANDER," "BRITANNIA AND EVE," "THE ILLUSTRATED SPORTING & DRAMATIC NEWS," 65 and 67, Avenue des Champs Elysées, and at Berlin, 32, Kurfürstendamm, there is a comfortable Reading Room where current and back copies of these publications may be read. In addition, advice and information will gladly be given free of charge on hotels, travel, amusements, shops, and the despatch of packages to all countries throughout the world.

Our Advertisement Agents for France, Belgium and Germany are the Agence Dorland, who should be addressed (regarding French and Belgian business) at 65 & 67, Avenue des Champs Elysées, Paris, VIII<sup>e</sup>, and at 32, Kurfürstendamm, Berlin, W.15, regarding German business.

For Switzerland and Italy our advertisement Agents are the Agence Havas, who should be addressed at 8, Rue de la Rôtisserie, Geneva, SWITZERLAND.



The ILLUSTRATED NEWSPAPERS  
Reading Room in Berlin

**TERMS OF SUBSCRIPTION**

(1932) TO

"THE ILLUSTRATED LONDON NEWS."

PAID IN ADVANCE.

**INLAND.**

Twelve Months (including Christmas Number) ...	£3 4 0
Six Months ...	1 10 0
Including Christmas Number ...	1 14 0
Three Months ...	0 15 0
Including Christmas Number ...	0 18 10

**CANADA.**

Twelve Months (including Christmas Number) ...	£3 1 8
Six Months ...	1 9 3
Including Christmas Number ...	1 12 6
Three Months ...	0 14 8
Including Christmas Number ...	0 17 10

**ELSEWHERE ABROAD.**

Twelve Months (including Christmas Number) ...	£3 11 4
Six Months ...	1 13 9
Including Christmas Number ...	1 17 6
Three Months ...	0 17 0
Including Christmas Number ...	1 0 4

Subscriptions must be paid in advance direct to the Publishing Office, 346, Strand, in English money; by cheque crossed "The National Provincial and Union Bank of England, Limited"; or by Post Office Orders, payable at the East Strand Post Office, to THE ILLUSTRATED LONDON NEWS AND SKETCH, LTD., 346, Strand, London, W.C.2

The Agence Havas is specially appointed to receive advertisements for "The Illustrated London News" for Western European countries, excepting France, at its Head Office, 62, Rue de Richelieu, Paris, and at all its branches. The representation for French advertising is in the hands of the Agence Dorland at 65-67, Avenue des Champs Elysées, Paris & branches.

**BIG AGE (10 YEARS — Guaranteed)**

**HIGHLAND QUEEN**

THE WHISKY WITH THE

**MACDONALD & MUIR, Distillers, LEITH; also GLASGOW and LONDON.**

When you write out your Christmas gift list, put down the **DRAGON BOOK** for the clever boys and girls you know. Those who revel in fun and prankish tricks will appreciate it just the same. They will keep your gift as a treasured possession, and you will have solved *their* gift problem economically and really effectively.

The **DRAGON BOOK**, crammed full of clever, humorous drawings by Alfred Leete, will afford hours of pleasure to any child who is big enough to shun stupidity and yet old enough to appreciate the brilliant portrayal of the many episodes in the life of DENNYS, Rouge Dragon of the Fiery Breath.

**YOU CAN GET THE DRAGON BOOK  
AT ANY BOOKSTALL.**

**Price - Two Shillings & Sixpence.**

**ASTROLOGY**

Your Horoscope cast by astrologer of 30 years' world repute. Life's Prospects, possibilities described. Health, Marriage, Finance, Business guidance, Events, Changes, etc. Send P.O. 1/-, Birth-date, stamped-addressed envelope for expert delineation, the accuracy of which will amaze you.

ELROY STUDIOS (ILN), 37, ALBEMARLE STREET, LONDON W.1.

Innumerable unsolicited testimonials received

**NICE  
ATLANTIC  
HOTEL**

Newest first-class Hotel of distinction.

Greatest comfort and atmosphere of home. 200 Rooms.

MODERATE TERMS. Swiss Proprietor.

**NOVIO  
TOILET PAPER**  
Rolls, Packets & Cartons THIN  
—most economical. Soft  
Sold everywhere. Strong  
Silky  
See the 'Lancet's' opinion, 27th July, 1907

For cleaning Silver, Electro Plate &c.  
**Goddard's  
Plate Powder**

Sold everywhere 6d 1/- 2/- & 4/-

J. Goddard & Sons, Station Street, Leicester



# Don't be vague—ask for Haig

ON THE TRAIN

IN THE AIR

FOR THE HOME

AT THE THEATRE

IN THE CLUB

ON BOARD SHIP

JOHN HAIG & CO. LTD.  
Owing Haig & Haig Ltd.  
MARKINCH SCOTLAND  
GOLD LABEL  
LIQUEUR SCOTCH WHISKY

BOTTLED BY  
JOHN HAIG & CO. LTD.  
DISTILLERS

**NO FINER WHISKY GOES INTO ANY BOTTLE**